

**EFFECT OF STRATEGIC MANAGEMENT PROCESSES ON PERFORMANCE  
OF DAIRY AGRIBUSINESS SMALL AND MEDIUM ENTERPRISES IN  
MURANG'A COUNTY, KENYA**

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**A Project Submitted to the Institute of Postgraduate Studies of Kabarak University  
in Partial Fulfilment of the Requirements for the Award of Master of Business  
Administration (Strategic Management) Degree**

**KABARAK UNIVERSITY**


**NOVEMBER, 2025**

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## RECOMMENDATION

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The project entitled “**Effect of Strategic Management Processes on Performance of Dairy Agribusinesses, Small and Medium Enterprises in Murang’a County, Kenya,**” and written by **Nicholas Owino Obare**, is presented to the Institute of Postgraduate Studies of Kabarak University. We have reviewed the research thesis and recommend it be accepted in partial fulfillment of the requirements for the award of the degree of Master of Business Administration in Strategic Management

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## **DEDICATION**

I dedicate this work to my family, siblings, and my parents for their support and for being patient and understanding.

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## ABSTRACT

The performance of small and medium enterprises (SMEs) in Kenya's dairy agribusiness sector increasingly depends on their ability to apply structured strategic management processes in a dynamic and competitive environment. Although the sector plays a critical role in local economic development, there is limited empirical evidence on how the full cycle of strategic planning, implementation, evaluation, and control collectively shapes firm performance. Guided by the Resource-Based View, which emphasizes internal capabilities, and Contingency Theory, which highlights environmental alignment, this study examined the effect of these four strategic management processes on the performance of dairy agribusiness SMEs in Murang'a County. A descriptive cross-sectional design was used, and data were collected from 143 enterprises through a structured questionnaire. Descriptive statistics, reliability tests, correlations, and regression models were applied to assess the adoption of strategic processes and their effect on performance. Results showed that all four strategic management processes were moderately established, indicating partial institutionalization of structured managerial practices. Regression findings revealed that strategic planning, strategy implementation, strategy evaluation, and strategic control each had a positive, statistically significant effect on performance, with planning and control emerging as stronger predictors. These results demonstrate that improvements in firm performance are linked not to isolated managerial actions but to the integration and consistent application of the strategic management cycle. The study contributes new empirical evidence to the strategic management literature by focusing on dairy agribusiness SMEs in a developing economy context. The findings underscore the need for enterprises to strengthen planning routines, enhance execution capabilities, and adopt systematic evaluation and control mechanisms to improve performance. The study recommends targeted managerial capacity-building and supportive policy interventions to help firms institutionalize these processes. Future research should examine the longitudinal evolution of these practices and investigate potential moderating factors such as technology adoption.

**Keywords:** *Strategic Management Processes; Strategic Planning; Strategy Implementation; Strategy Evaluation; Strategic Control; Performance; Dairy Agribusiness; SMEs.*

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## **LIST OF ABBREVIATIONS AND ACRONYMS**

AIS	Accounting Information Systems
ANOVA	Analysis of Variance
C2B	Consumer to Business
CBA	Cost-Benefit Analysis
CRM	Customer Relationship Management
DW	Durbin–Watson Test
EVA	Economic Value Added
FAM	Fixed Asset Management
GDP	Gross Domestic Product
GP	Gross Profit
HRM	Human Resources Management
IERC / IREC	Institutional Ethics Review Committee
IIED	International Institute for Environment and Development
IRR	Internal Rate of Return
KDB	Kenya Dairy Board
KUREC / KUR-ERC	Kabarak University Research Ethics Committee
MBA	Master of Business Administration
MSA	Middle Size Agribusinesses
MSMEs	Micro, Small, and Medium Enterprises
NACOSTI	National Commission for Science, Technology and Innovation
NGOs	Non-Governmental Organizations

OECD	Organization for Economic Co-operation and Development
RBV	Resource-Based View
ROI	Return on Investment
ROE	Return on Equity
SARFIT	Structural Adaptation to Regain Fit
SEM	Structural Equation Modelling
SMEs	Small and Micro-Sized Enterprises
SPSS	Statistical Package for Social Sciences
VRIN	Valuable, Rare, Inimitable, and Non-substitutable

## CONCEPTUAL AND OPERATIONAL DEFINITION OF TERMS

**Strategic Management Processes:** Strategic Management Processes involve a systematic approach to formulating, implementing, and evaluating strategies to achieve organizational goals, integrating planning, control, and execution. In this study, the term encompasses the practices of setting goals, monitoring performance, and allocating resources among dairy SMEs in Murang'a County, measured through questionnaire responses that assess how these firms develop, execute, and evaluate their strategies to enhance performance (David & David, 2023). This concept frames the study by linking strategic activities to SME outcomes, with survey data capturing the extent of these processes in dairy firms.

**Strategic Planning:** Strategic Planning refers to the process of setting organizational goals, analyzing the competitive environment, and allocating resources to achieve strategic objectives. In this study, it involves dairy SMEs in Murang'a County developing business goals, conducting market analysis, and planning resource use, measured through survey responses on their planning activities (Bryson & Alston, 2022). The term is central to examining how structured planning influences dairy SME performance, with questionnaire data reflecting the frequency and effectiveness of these practices.

**Strategic Implementation:** Strategic Implementation is the execution of strategic plans through resource allocation, task assignment, and operational management. In this study, it involves dairy SMEs in Murang'a County putting their planned strategies into action by coordinating resources and activities, measured by survey data on implementation efforts (Thompson et al., 2021). The term is applied to evaluate how effective strategy execution drives dairy SME outcomes, with questionnaire responses detailing resource use and activity coordination.

**Strategic Evaluation:** Strategic Evaluation refers to the process of assessing the outcomes of implemented strategies to ensure they align with organizational goals and remain effective in changing environments (Grant, 2024). In this study, it involves dairy SMEs in Murang'a County reviewing strategic outcomes and making adjustments where necessary, measured through survey

responses on evaluation practices and corrective actions. This concept helps determine how regular and structured evaluations influence firm performance.

**Strategic Control:** Strategic Control entails monitoring and evaluating the implementation of strategic plans to ensure alignment with organizational goals. For this study, it refers to how dairy SMEs in Murang'a County track performance metrics, such as sales or production volumes, and adjust their strategies accordingly, captured through specific questionnaire items (Hanson et al., 2021). This concept is used to assess the impact of control mechanisms on performance, using survey data to gauge the extent of monitoring practices among dairy firms.

**Performance of Dairy Agribusiness:** Performance of Dairy Agribusiness SMEs denotes the extent to which organizational goals are achieved, encompassing financial indicators like profitability and non-financial indicators like customer satisfaction. In this study, it is measured by financial metrics (revenue, profit margins) and non-financial metrics (market share, customer satisfaction) among dairy SMEs in Murang'a County, collected through survey responses (Kaplan & Norton, 2020). As the dependent variable, it is evaluated to determine the impact of strategic processes, with survey data providing insights into performance levels across dairy firms.

**Dairy SMEs:** In this study, dairy agribusiness SMEs refer specifically to dairy-focused enterprises registered with the Kenya Dairy Board (KDB) as milk producer groups or cooperative societies involved in the production, bulking, cooling, or marketing of milk within Murang'a County. These groups form part of the formal dairy value chain and are identified through KDB's official registry. Their inclusion in the study is based on their operational functions along the dairy value chain, as captured in the survey tool assessing core business activities and levels of engagement in dairy enterprise functions (Kenya Dairy Board, 2023).

## **CHAPTER ONE**

### **INTRODUCTION**

This chapter provides an overview of the study by delving into its background. It will delve into the Statement of the Problem, highlighting the issues that necessitate the research. Additionally, the chapter will outline the study's general objective, specific objectives, and research hypotheses. Moreover, it will emphasize the significance of the study and define its scope.

#### **1.1 Background of the Study**

Strategic management has become a central pillar of enterprise competitiveness in agricultural value chains, where volatility, seasonality, and increasing regulatory pressures require firms to adopt structured managerial approaches to ensure sustainability and efficiency. Dairy Agribusiness Small and Medium Enterprises (SMEs) operate in a particularly demanding environment in which production cycles, milk quality standards, market prices, and input costs fluctuate regularly, forcing enterprises to continuously adapt to survive. Global and regional evidence demonstrates that dairy enterprises with well-developed strategic management processes are more likely to maintain consistent supply, improve product standards, and achieve competitive positioning in rapidly changing markets (ILRI, 2021; FAO, 2021; World Bank, 2022). The East African dairy economy, including Kenya, has undergone significant transformation in recent years as demand for processed dairy products has expanded and quality and safety requirements have become more stringent. These trends have heightened the importance of strategic decision-making and internal organizational capabilities for dairy enterprises aiming to withstand competition, market uncertainties, and regulatory expectations (Omore et al., 2022). Understanding how strategic

management influences performance is therefore essential for supporting the resilience and growth of Dairy Agribusiness SMEs.

Strategic planning is refers to the deliberate process through which enterprises set long-term objectives, assess their internal and external environments, and allocate resources to achieve their strategic priorities, and this function is widely recognized as fundamental for agribusiness competitiveness (Tegemeo Institute, 2020; Mbaya, Maina & Namusonge, 2021; USAID, 2022). In the dairy context, strategic planning allows Dairy Agribusiness SMEs to forecast milk availability, anticipate seasonal fluctuations, determine appropriate procurement strategies, and invest in essential infrastructure such as cooling equipment, transport facilities, and quality assurance systems.

Planning practices provide a structured platform for aligning enterprise operations with market needs and regulatory frameworks, thereby reducing uncertainties inherent in dairy production and distribution (SNV, 2021). Research from Kenya and Tanzania indicates that dairy enterprises with formal planning routines achieve greater operational stability and improved product reliability than those that rely on reactive decision-making (Tegemeo Institute, 2020; FAO, 2021). Strategic planning also helps enterprises identify unique capabilities, such as access to producers, cold chain assets, and skilled labor, which aligns with the Resource-Based View that emphasizes the value of internal resources in achieving competitive advantage (ILRI, 2021). For dairy enterprises, planning is therefore a critical determinant of long-term performance.

Strategy implementation encompasses the coordinated execution of strategic plans through systematic actions and operational processes, and this capability is consistently cited as one of the most significant determinants of performance in agrifood enterprises (SNV, 2021; Omore et al., 2022; ILRI, 2021). In Dairy Agribusiness SMEs, strategy implementation determines whether well-outlined plans translate into improved

production efficiency, enhanced hygiene compliance, reliable distribution networks, and increased customer satisfaction. Effective implementation requires clear communication of roles, strong leadership, consistent adherence to standard operating procedures, and adequate allocation of financial and human resources (USAID, 2022). Many dairy enterprises struggle with implementation challenges due to limited managerial training, inconsistent staff supervision, high labour turnover, and gaps in internal communication structures (FAO, 2021). Poor implementation leads to inefficiencies, including delays in milk collection, inadequate handling practices, breakdowns in cold chain processes, and compromised product standards. Evidence from East African dairy value chains shows that enterprises that excel in implementation outperform competitors because they can translate strategic intentions into repeatable, reliable operational outcomes that directly influence performance (World Bank, 2022).

Strategy evaluation is the systematic assessment of strategic actions to determine their effectiveness, efficiency, and alignment with enterprise goals, and it serves as a critical feedback mechanism in dynamic agricultural value chains (World Bank, 2022; ILRI, 2021; FAO, 2021). Dairy Agribusiness SMEs operate in environments where milk supply volumes, input costs, consumer demand, and regulatory requirements change rapidly, making evaluation essential for continuous learning and informed decision-making. Evaluation practices in dairy enterprises typically include tracking milk quality metrics, analyzing spoilage levels, reviewing procurement costs, monitoring delivery reliability, and obtaining customer feedback on product satisfaction (Tegemeo Institute, 2020). Research indicates that SMEs that conduct regular evaluations are more likely to detect inefficiencies early, apply corrective actions, and refine their strategic direction to align with market conditions (USAID, 2022). Evaluation also enhances transparency and accountability, helping enterprises ensure that operational outcomes match planned

expectations. Through evaluation, dairy enterprises can strengthen their adaptive capacity and identify new opportunities to improve competitiveness and performance in dynamic markets (ILRI, 2021).

Strategic control is considered the continuous monitoring of enterprise processes to ensure alignment with strategic intentions and the timely correction of deviations, and it plays an essential role in food processing and dairy value chains due to strict quality, safety, and timing requirements (FAO, 2021; KDB, 2022; ILRI, 2021). Dairy Agribusiness SMEs rely on strong control systems to ensure that milk handling, processing, storage, and distribution meet national safety and hygiene standards. Control mechanisms in dairy enterprises include routine quality inspections, temperature monitoring in cold chain systems, financial performance reviews, staff performance assessments, and compliance checks against regulatory requirements (FAO, 2021).

Weak control practices contribute to quality lapses, increased spoilage, regulatory breaches, and customer dissatisfaction, all of which significantly undermine enterprise performance (World Bank, 2022). Evidence from dairy studies shows that SMEs with robust control mechanisms maintain higher operational consistency and experience fewer disruptions caused by poor hygiene practices or supply chain inefficiencies (ILRI, 2021). Strategic control, therefore, supports enterprise resilience and enables dairy businesses to maintain competitiveness in markets where consistency and reliability are essential.

Performance encapsulates the extent to which an enterprise achieves its objectives in terms of profitability, operational efficiency, product quality, customer satisfaction, and compliance, and this multidimensional perspective is widely applied in the evaluation of agribusiness firms (Njogu & Murigi, 2023; Ndung'u, Mwirigi & Gatimbu, 2023; FAO, 2021). In dairy value chains, performance extends beyond financial indicators to include product safety, supply reliability, waste minimization, and the capacity to meet regulatory

and market requirements. Dairy Agribusiness SMEs that maintain strong operational performance benefit from improved market access, enhanced customer trust, and greater resilience against supply-side shocks such as price fluctuations or seasonal shortages (ILRI, 2021). Empirical studies highlight that performance in dairy enterprises is significantly influenced by managerial capabilities, technological capacity, cold chain infrastructure, and effective coordination of procurement and distribution functions (USAID, 2022). Evaluating performance holistically enables a deeper understanding of how strategic decisions and internal processes contribute to enterprise success. Strengthening performance requires deliberate effort across planning, implementation, evaluation, and control, making strategic management processes essential for sustained competitiveness in dairy markets.

Kenya's dairy industry is the largest in East Africa and contributes significantly to national economic development, household incomes, and food security. Dairy value chains involve a wide network of small-scale producers, Dairy Agribusiness SMEs, processors, distributors, and service providers that interact in an increasingly formalized and competitive market environment (KNBS, 2023). Despite its central role, the sector faces persistent inefficiencies, including inconsistent milk quality, seasonal supply variability, high production costs, and inadequate cold chain infrastructure (FAO, 2021). Managerial weaknesses among Dairy Agribusiness SMEs further exacerbate these challenges because enterprises that lack structured strategic processes struggle to comply with hygiene standards, maintain quality, or coordinate input and output markets efficiently (USAID, 2022). National studies repeatedly highlight that improvements in dairy sector competitiveness require stronger managerial capabilities at the SME level, particularly in planning, implementation, and control (World Bank, 2022). These issues

show that strategic management processes are necessary to overcome structural inefficiencies and enhance enterprise resilience.

The Kenyan dairy industry is experiencing rising competition as more private processors enter the market and consumers increasingly demand higher-quality dairy products. This competitive pressure requires Dairy Agribusiness SMEs to adopt structured strategic management processes to maintain relevance and market access in both formal and informal dairy channels (ILRI, 2021). Inadequate planning, inconsistent implementation, and limited evaluation capacity expose enterprises to quality lapses, waste, supply disruptions, and noncompliance with regulatory standards (FAO, 2021).

National competitiveness reports show that SMEs that institutionalize strategic management processes adapt more effectively to price volatility, regulatory scrutiny, and rapidly changing consumer preferences (World Bank, 2022). Furthermore, Kenyan dairy enterprises face increased operational complexity due to the integration of modern retail, shifting feed prices, and the growing formalization of milk marketing pathways. These complexities underscore the need for deliberate managerial systems that enhance stability and performance. Strategic management processes therefore, form the foundation for enterprise competitiveness in Kenya's evolving dairy landscape.

Kenya's dairy supply chain presents additional challenges related to governance, value chain fragmentation, and limited coordination among actors. Some milk aggregation centers and processors experience inconsistent supply due to poor producer coordination, inadequate planning, and weak business development support, which affects the operational performance of Dairy Agribusiness SMEs downstream (Tegemeo Institute, 2020). The sector also suffers from uneven adoption of quality assurance systems, inconsistent application of hygiene standards, and limited monitoring of product handling, particularly in rural and peri-urban collection points (FAO, 2021). These issues

can be traced to gaps in strategic management capabilities among enterprises involved in procurement, transportation, processing, and distribution. Research demonstrates that dairy enterprises that integrate evaluation and control mechanisms throughout their operations maintain better milk quality and experience lower rates of contamination and spoilage (ILRI, 2021). These national-level dynamics highlight the need for further study of the influence of strategic management processes on performance in dairy SMEs.

Murang'a County is one of Kenya's leading dairy regions with a strong history of milk production and a dense network of Dairy Agribusiness SMEs operating across the value chain. The county's agro-ecological conditions favor high milk yields, yet enterprise performance varies significantly due to differences in managerial capacity, infrastructure availability, and value chain integration (Murang'a County Government, 2023). Many dairy enterprises in the county struggle with inadequate cold chain systems, irregular supply patterns, and rising production and transportation costs. These challenges increase operational risks and reduce competitiveness in both formal and informal markets (USAID, 2022). County-level assessments indicate that some enterprises lack structured planning routines, do not conduct regular performance evaluations, and fail to consistently enforce quality standards (KDB, 2022). Such weaknesses hinder enterprise growth and expose dairy businesses to repeated performance disruptions.

Murang'a's dairy enterprises also face governance challenges that constrain strategic coordination and long-term competitiveness. Studies by ILRI and KDB indicate that several Dairy Agribusiness SMEs rely on informal management practices that limit their ability to respond effectively to market opportunities or emerging threats (ILRI, 2021). Inconsistent procurement practices, poorly enforced hygiene standards, limited staff training, and fragmented operational oversight hinder enterprise performance in Murang'a County (Murang'a County Government, 2023). The uneven adoption of

strategic management processes across enterprises results in wide differences in efficiency, milk quality outcomes, and market access. These disparities suggest that managerial processes are an important explanatory factor for performance variations among dairy SMEs. This context underscores Murang'a County as an ideal setting for examining the influence of strategic management processes on enterprise performance.

National and county policies further reinforce the importance of adopting structured strategic management processes across Kenya's dairy value chain. Kenya Vision 2030 identifies agricultural modernization, enterprise competitiveness, and efficiency improvements as central pillars of economic transformation (Government of Kenya, 2019). Strategic planning, managerial discipline, and evidence-based decision-making are emphasized as key enablers of agricultural growth. Similarly, the Agricultural Sector Transformation and Growth Strategy advocates for performance accountability, enhanced coordination among value chain actors, and stronger enterprise-level management to improve outcomes across the agricultural sectors (Government of Kenya, 2019). These frameworks encourage the institutionalization of planning, execution, monitoring, and evaluation within dairy enterprises. The Big Four Agenda also underscores the importance of food security and improved agricultural governance for national development (Government of Kenya, 2018). These national initiatives highlight the need for Dairy Agribusiness SMEs to adopt structured management systems to enhance performance.

At the county level, Murang'a's Integrated Development Plan emphasizes capacity building, value chain strengthening, enterprise formalization, and the adoption of management best practices as strategies to promote dairy sector growth (Murang'a County Government, 2023). The Kenya Dairy Industry Regulations further mandate compliance with hygiene, safety, and documentation standards to ensure consistent

product quality and consumer safety (KDB, 2022). These policies reinforce the need for formalized strategic management processes that govern planning, operational execution, result evaluation, and real-time control. The alignment between national and county strategies demonstrates a policy environment that strongly encourages Dairy Agribusiness SMEs to adopt structured managerial approaches. This makes strategic management processes not only theoretically important but also practically relevant for enterprise performance in Murang'a County. Understanding the interaction between strategic management processes and performance is therefore important for informing policy implementation and enterprise development initiatives.

Although national and county-level policies emphasize structured strategic management practices, empirical evidence indicates that adoption among Dairy Agribusiness SMEs in Murang'a County remains inconsistent. Many enterprises apply strategic planning informally, implement operational activities without systematic oversight, and conduct limited performance evaluations (ILRI, 2021). These gaps affect their ability to comply with quality standards, maintain supply reliability, and remain competitive. Existing literature often focuses on isolated management practices such as milk hygiene, feed management, or cooperative governance, yet limited studies examine the combined influence of planning, implementation, evaluation, and control on performance. This lack of integrated analysis presents a clear empirical gap. The complex and dynamic nature of dairy operations underscores the need to study strategic management processes holistically to understand how they influence performance in Dairy Agribusiness SMEs. This gap provides a justified basis for the problem statement that follows.

## **1.2 Statement of the Problem**

Despite Kenya's status as one of the most developed dairy economies in sub-Saharan Africa, the performance of Dairy Agribusiness Small and Medium Enterprises remains

highly inconsistent, with persistent inefficiencies linked to inadequate managerial systems, weak strategic coordination, and limited operational oversight. National assessments reveal that dairy enterprises continue to experience challenges such as fluctuating supply, poor milk quality, high production costs, and weak compliance with safety and hygiene standards, all of which are exacerbated by gaps in strategic planning, implementation, evaluation, and control (Mutinda and Rao, 2021; FAO, 2021; World Bank, 2022).

Recent analyses indicate that Kenyan dairy enterprises face intensifying competitive pressures from expanding formal processors, rising consumer expectations, and more stringent regulatory requirements, yet many SMEs lack the structured managerial capabilities required to remain competitive in these conditions (USDA FAS, 2024; Otieno and Gicheha, 2021). In Murang'a County, where dairy activity is dense and the sector contributes significantly to household incomes and local economic development, similar performance weaknesses have been documented, including supply inconsistencies, governance deficits, and weak cold chain systems, all of which undermine enterprise growth and sustainability (Murang'a County Government, 2023; SNV, 2021). These challenges point to structural managerial constraints that have not been adequately addressed by conventional dairy-sector interventions.

Although strategic management processes are widely recognized as essential for enhancing firm competitiveness in dynamic agrifood systems, empirical evidence on their adoption and effectiveness within Kenya's dairy value chain remains fragmented and insufficient. Studies examining the sector have often focused on narrow aspects of enterprise operations such as sourcing practices, processing efficiency, cooperative governance, or growth strategies, without considering how strategic planning, strategy implementation, strategy evaluation, and strategic control collectively influence

performance outcomes (Mbaya et al., 2021; Ndung'u et al., 2023; Njogu and Murigi, 2023).

This fragmented body of research does not provide a coherent understanding of how integrated managerial systems shape enterprise performance in dairy SMEs, despite theoretical arguments that emphasize the interdependence of these processes in achieving competitive advantage in volatile environments (Government of Kenya, 2019; Kwamboka et al., 2022). Furthermore, the sector's most comprehensive diagnostics by ILRI, FAO, and SNV highlight widespread gaps in managerial discipline, weak performance monitoring, informal decision making, and poor alignment between strategic intentions and operational realities, yet these studies do not empirically link these gaps to performance outcomes at SME level (ILRI, 2021; FAO, 2021; SNV, 2021).

The contextual gap is particularly evident in Murang'a County, where Dairy Agribusiness SMEs operate in a complex environment characterized by infrastructural deficits, fluctuating market conditions, and evolving policy expectations, but no empirical study has comprehensively examined how the four strategic management processes jointly influence performance in this specific county context. The county's strategic documents highlight persistent issues of weak governance, inconsistent enforcement of quality standards, informal business practices, and limited record-keeping among dairy enterprises, all of which reflect inadequate adoption of structured managerial processes (Murang'a County Government, 2023). This gap is critical because Murang'a is one of the country's top dairy counties, and performance differences between enterprises operating under similar ecological and market conditions suggest variation in managerial capabilities rather than environmental constraints alone (Omore et al., 2022). Without empirical evidence linking strategic management processes to performance outcomes, policymakers, sector regulators, and enterprise managers lack the

insights needed to design interventions that strengthen enterprise competitiveness and sustainability.

Therefore, there is a justified need for an empirical study that examines the influence of strategic planning, strategy implementation, strategy evaluation, and strategic control on the performance of Dairy Agribusiness Small and Medium Enterprises in Murang'a County. Such a study will address the conceptual, empirical, and contextual gaps identified in current dairy sector research and provide the evidence necessary to strengthen enterprise management and improve performance within one of Kenya's most important dairy regions.

### **1.3 Study Objectives**

#### **1.3.1 General Objective**

The general purpose of the study was to assess the effect of Strategic Management Processes on the performance of dairy Agribusiness SMEs in Murang'a County, Kenya.

#### **1.3.2 Specific Objectives**

The study sought to address the following specific objectives.

- i. To examine the effect of the strategic planning process on the performance of dairy Agribusiness SMEs in Murang'a County, Kenya.
- ii. To determine the effect of the strategy implementation process on the performance of dairy Agribusiness SMEs in Murang'a County, Kenya.
- iii. To investigate the effect of the strategy evaluation process on the performance of dairy Agribusiness SMEs in Murang'a County, Kenya
- iv. To assess the effect of the strategy control process on the performance of dairy Agribusiness SMEs in Murang'a County, Kenya.

### **1.4 Research Hypothesis**

The study also sought to test the following research hypotheses.

H<sub>01</sub>: There is no statistically significant effect of the strategic planning process on the performance of dairy Agribusiness SMEs in Murang'a County, Kenya.

H<sub>02</sub>: There is no statistically significant effect of the strategy implementation process on the performance of dairy Agribusiness SMEs in Murang'a County, Kenya.

H<sub>03</sub>: There is no statistically significant effect of the strategy evaluation process on the performance of dairy Agribusiness SMEs in Murang'a County, Kenya.

H<sub>04</sub>: There is no statistically significant effect of strategy control process on the performance of dairy Agribusiness SMEs in Murang'a County, Kenya.

### **1.5 Justification for the Study**

This study is justified by persistent performance weaknesses among Dairy Agribusiness Small and Medium Enterprises in Murang'a County, despite the county's strong dairy potential and its central role in Kenya's milk economy. Reports from ILRI, the Kenya Dairy Board, and Murang'a County indicate continuing challenges related to weak planning, inconsistent implementation of operational routines, limited strategic evaluation, and inadequate internal control systems, yet existing research has not provided integrated evidence explaining how these managerial gaps affect performance. Anchoring the study on the Resource-Based View is justified because this theory emphasises the importance of internal capabilities such as managerial routines, organisational processes, and strategic decision-making as foundations of competitive advantage.

Contingency Theory further justifies the study by recognising that the effectiveness of these internal processes depends on how well they fit the environmental conditions that characterise Murang'a's dairy sector, including fluctuating supply, tightening regulatory

expectations, and evolving market demands. By examining all four strategic management processes together and contextualising them within Murang'a's operational realities, the study addresses a clear conceptual and empirical gap while generating evidence that can guide county authorities, regulators, and dairy enterprise managers in strengthening performance within a key agricultural sector.

### **1.6 Significance of the Study**

This study is significant because it provides practical, context-specific evidence that can help Dairy Agribusiness Small and Medium Enterprises improve performance by adopting structured strategic management processes. The findings will offer enterprise managers insights into how to strengthen planning, implementation, evaluation, and control practices to enhance competitiveness, product quality, and operational efficiency. For the Murang'a County Government and national regulatory bodies such as the Kenya Dairy Board, the study will provide empirical evidence to support policy design, capacity-building initiatives, and value chain development programmes. Academic researchers will benefit from the study's integrated approach, which advances understanding of strategic management processes within agricultural enterprises and contributes new knowledge to the field where empirical evidence remains limited. Development partners and dairy sector stakeholders will also find the results useful for designing interventions that address managerial gaps and promote sustainable growth in the dairy value chain.

### **1.7 Scope of the Study**

The scope of this study is defined conceptually, geographically, and by the variables under investigation. Conceptually, the study focuses on strategic management processes and their influence on the performance of Dairy Agribusiness Small and Medium Enterprises. The strategic management processes examined include strategic planning,

strategy implementation, strategy evaluation, and strategic control. In contrast, performance is examined from operational, market, and organisational perspectives relevant to dairy enterprises. Geographically, the study is confined to Murang'a County, one of Kenya's leading dairy-producing regions, which hosts a diverse range of Dairy Agribusiness Small and Medium Enterprises engaged in aggregation, processing, distribution, and related services. Variable-wise, the study limits its analysis to the four independent variables that constitute the strategic management processes and the dependent variable representing enterprise performance, without extending to other organisational or environmental factors not captured within these constructs. This scope ensures a focused examination of the relationships between strategic management processes and performance within the specific context of dairy enterprises in Murang'a County.

### **1.8 Assumptions of the Study**

This study is based on several assumptions that guided its design and interpretation. It is assumed that respondents from Dairy Agribusiness Small and Medium Enterprises provided honest, accurate, and complete information regarding their managerial practices and performance, as the validity of the study's results depends on the reliability of self-reported data. It is also assumed that the managerial staff participating in the study possessed sufficient knowledge of their organization's strategic processes to respond meaningfully to the questions posed, given that strategic management practices are often known primarily to individuals involved in decision-making.

The study assumes that the operational environment of dairy enterprises in Murang'a County remained relatively stable during the data collection period, so that the responses reflect normal business conditions rather than temporary disruptions. It is further assumed that the selected enterprises had functional systems in place that enabled them

to engage in some form of planning, implementation, evaluation, or control because the study seeks to measure variations in the extent of such practices rather than their complete absence. These assumptions provided the basis for interpreting relationships among strategic management processes and performance within the dairy subsector.

### **1.9 Limitations and Delimitations of the Study**

This research acknowledges certain limitations inherent in its design and scope. The study's allocated duration was insufficient to capture the long-term effects of strategic management processes on performance. Furthermore, uncontrollable external factors, such as market fluctuations, economic conditions, and governmental policies, may affect the performance of dairy agribusiness SMEs, making it challenging to isolate the effects of strategic management processes. The main challenge lay in the extensive coverage required due to the dense population of the selected sub-counties. To mitigate this, the researcher employed local research assistants with comprehensive knowledge of the area, thereby optimizing data collection. Additionally, the study anticipated difficulties in securing direct engagement with farm managers of dairy entities due to their field-intensive schedules.

This limitation was addressed by implementing a flexible questionnaire administration strategy that allowed respondents to complete the instruments at their convenience. The study's delimitations focused on dairy agribusiness SMEs in Murang'a County, Kenya. This targeted approach, while enabling an in-depth analysis of the local context, constrained the generalizability of findings to other regions or broader industry sectors. The study's delimitation was deliberately focused on Murang'a County, Kenya, to manage scope and ensure detailed analysis within these specific regions.

The study concentrated on small and medium enterprises (SMEs) in the dairy agribusiness sector, excluding larger enterprises and other agribusiness sectors to

maintain a focused research scope. Furthermore, the research scope was deliberately confined to four key aspects of strategic management: planning, implementation, evaluation, and control. This focused approach, while excluding other elements such as strategy formulation, allows for a more nuanced examination of these critical processes. The study's performance assessment metrics are limited to specific indicators, including financial performance, market share, and customer satisfaction. It is important to note that the research was conducted within a defined temporal framework, primarily utilizing primary data collected through surveys and interviews, supplemented by relevant secondary sources. These carefully delineated boundaries serve to enhance the study's focus and feasibility while acknowledging its limitations.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter reviews the existing literature on strategic management processes and their effects on performance. It presents a detailed theoretical and empirical review and conceptual framework on the area under investigation.

#### **2.2 Theoretical Review**

The theoretical review establishes a conceptual foundation for investigating the effect of strategic management processes on the performance of dairy agribusiness small and medium enterprises (SMEs) in Murang'a County, Kenya. By anchoring the study in robust theoretical frameworks, this section provides a lens to analyze how strategic planning, implementation, evaluation, and control influence SME performance in the dairy sector. The Resource-Based View (RBV) and Contingency Theory are selected for their relevance in explaining how internal resources and external contextual factors shape the performance of dairy agribusiness SMEs. RBV emphasizes the role of unique resources in achieving competitive advantage, which is critical for understanding how dairy SMEs optimize their assets to enhance performance. Contingency Theory highlights the need to align strategic processes with environmental conditions, offering insights into how Kenyan dairy SMEs adapt to local market and operational challenges.

##### **2.2.1 Resource-Based View (RBV) Theory**

The Resource-Based View (RBV) emerged in strategic management scholarship during the late 1980s and early 1990s as a response to approaches that focused predominantly on industry structure as the primary driver of firm performance. Seminal contributions by Wernerfelt (1984) and later Barney (1991) shifted attention from external forces to the internal attributes of firms, arguing that organizations derive competitive advantage from

the resources and capabilities they possess and the manner in which they utilize them. This perspective redirected strategic management thinking toward the importance of internal strengths such as skills, processes, knowledge, and organizational routines. RBV became particularly influential because it offered a clear framework for understanding why firms operating in the same environment often achieve very different levels of performance.

The central tenet of RBV is that firms achieve sustained competitive advantage when they develop or acquire resources that are valuable, rare, difficult for competitors to imitate, and supported by organizational structures that allow them to be fully exploited. These resources may be tangible, such as physical infrastructure, or intangible, such as managerial expertise, organizational culture, and knowledge systems. RBV emphasizes that it is not resource possession alone that matters, but the capabilities that enable firms to coordinate, combine, and deploy resources effectively. In this sense, the theory recognizes organizational processes as critical assets that shape how firms respond to challenges, seize opportunities, and maintain efficiency. RBV therefore, places strategic processes at the center of firm competitiveness.

Despite its influence, RBV has been critiqued for theoretical and empirical limitations. Priem and Butler (2001) argue that the theory lacks clear methodological guidelines for identifying and measuring valuable or rare resources, creating challenges for empirical validation. Kraaijenbrink et al. (2010) also highlight that RBV adopts an overly static view of firms, paying less attention to how resources evolve in dynamic environments or how rapidly changing conditions may erode competitive advantage. Newbert (2007) adds that RBV offers limited guidance on how managers can recognise which resources will generate future value, particularly in sectors with high uncertainty. These critiques suggest that while RBV provides powerful insights, it must be applied with careful

consideration of its interpretive boundaries, particularly in fast-moving, resource-constrained sectors.

RBV is particularly relevant to Dairy Agribusiness Small and Medium Enterprises because their performance depends heavily on internal operational capabilities rather than market position alone. Dairy enterprises must manage highly perishable products, comply with stringent quality and hygiene standards, coordinate supply networks, and maintain reliable production routines. These tasks require strong internal systems, well-developed managerial competencies, and operational discipline. In contexts such as Murang'a County, where dairy SMEs face fluctuating supply, infrastructure gaps, and tightening regulatory expectations, enterprises with strong internal capabilities are better able to maintain efficiency and sustain competitive advantage. RBV provides a useful lens for understanding why some dairy enterprises outperform others despite operating under similar environmental conditions.

RBV directly supports the four strategic management processes examined in this study. Strategic planning helps firms identify and prioritise resource allocations, reinforcing the RBV's notion that competitive advantage arises from the deliberate development of valuable internal capabilities. Strategy implementation reflects an organisation's ability to convert plans into action through coordinated routines, which RBV considers a core capability that competitors cannot easily imitate. Strategy evaluation supports RBV by focusing on organisational learning, performance analysis, and adaptation, thereby strengthening internal knowledge resources. Strategic control aligns with RBV by emphasising systems of oversight and enforcement that maintain consistent standards and protect valuable organisational routines. Each SMP variable therefore, represents an internal capability that contributes to the competitive strength of dairy enterprises.

RBV provides a clear explanation for the expected relationship between strategic management processes and performance. When dairy enterprises develop strong internal capabilities in planning, implementation, evaluation, and control, they are better positioned to manage operational risks, improve product quality, reduce inefficiencies, and respond effectively to changing market demands. These internal strengths contribute directly to improved financial, operational, and market performance. In contrast, weak internal processes can lead to inconsistent output, quality failures, and poor resource utilisation, which diminish performance. Therefore, RBV offers a coherent theoretical foundation for understanding why the effectiveness of strategic management processes is likely to predict performance outcomes among Dairy Agribusiness Small and Medium Enterprises in Murang'a County.

### **2.2.2 Contingency Theory**

Contingency Theory emerged in the 1960s as a response to earlier universalistic management theories that assumed a single best way of organising firms. Scholars such as Burns and Stalker (1961) and Lawrence and Lorsch (1967) argued that organisational effectiveness depends on the degree of alignment between internal processes and external environmental conditions. Unlike classical management approaches that promoted uniform organisational structures, Contingency Theory introduced the idea that managerial decisions must be adapted to specific contexts. This theoretical shift became foundational in strategic management because it recognised that firms operate in dynamic environments characterised by uncertainty, complexity, and varying external pressures.

At its core, Contingency Theory posits that organisational strategies, structures, and processes must be tailored to contextual factors such as market conditions, technological change, competition, regulatory pressure, and resource availability. The theory argues

that no single strategic approach guarantees superior performance across all situations. Instead, firms must develop processes that align with environmental demands and adjust them as conditions evolve. In strategic management research, Contingency Theory provides a framework for understanding why managerial practices succeed in some contexts but fail in others. It also highlights the importance of environmental scanning, flexibility, and adaptive decision-making in shaping organisational outcomes.

Despite its strong influence, the theory has been critiqued on several grounds. Critics argue that key concepts such as “fit” are difficult to operationalise empirically, which complicates measurement and comparison across firms (Donaldson, 2001). Others note that the theory may oversimplify the relationship between environment and strategy by assuming linear cause-and-effect relationships, even though environments are complex and nonlinear (Fiedler, 1993). Additionally, some scholars question the practicality of achieving perfect organisational fit given unpredictable market conditions and constraints on managerial capacity. These critiques suggest that while Contingency Theory offers valuable insights, it must be applied with recognition of contextual complexity and the limits of managerial foresight.

Contingency Theory is highly relevant to Dairy Agribusiness Small and Medium Enterprises, which operate in environments characterised by seasonality, perishability, regulatory oversight, and fluctuating market conditions. Dairy enterprises must adapt their strategic processes to align with changing milk supply volumes, variations in consumer preferences, tightening quality standards, and volatile input costs. In Kenya, and specifically in Murang’a County, dairy SMEs face additional contextual factors, including infrastructure gaps, governance weaknesses, competition from formal processors, and county-level regulatory variations. These conditions require enterprises to adopt flexible managerial processes that respond to environmental changes.

Contingency Theory, therefore, provides a valuable lens for explaining how strategic management processes should adapt to local realities to support enterprise performance.

The theory directly supports the four strategic management processes examined in this study. Strategic planning must account for environmental contingencies, including supply fluctuations, market demand, and regulatory expectations. Strategy implementation requires adaptive operational practices that can be modified when conditions shift. Strategy evaluation depends on continuously assessing the suitability of strategies in relation to emerging constraints and opportunities. Strategic control aligns directly with the principle of maintaining fit because it involves monitoring operations and making timely adjustments to correct deviations from strategic intent. Through these linkages, Contingency Theory highlights the need for flexible and context-sensitive strategic processes in dairy SMEs.

According to Contingency Theory, firms perform better when their strategies and internal processes align effectively with external conditions. For dairy enterprises, performance is influenced by how well their strategic actions correspond to variations in milk supply, customer needs, competition, and compliance requirements. When strategic management processes fail to account for these contingencies, enterprises may experience inefficiencies, quality lapses, and market exclusion. Conversely, when strategic processes are designed with adequate consideration of environmental conditions, dairy SMEs are more likely to achieve operational consistency, quality adherence, and competitive advantage. The performance of dairy SMEs is therefore closely tied to their ability to achieve strategic fit, making Contingency Theory a strong foundation for the study's dependent variable.

Together with the Resource-Based View, Contingency Theory provides complementary insights that strengthen the theoretical foundation of this study. While RBV emphasises

the importance of internal capabilities and processes as drivers of performance, Contingency Theory highlights the need to align these internal processes with external conditions. This synthesis acknowledges that strategic management processes contribute to performance not only because they strengthen internal routines, but also because they enable enterprises to adjust to context-specific challenges. In the dairy sector, where enterprises confront both resource constraints and volatile environments, the interaction between internal capabilities and external fit becomes critical. By grounding the study in both theories, a more holistic explanation is provided for how strategic planning, implementation, evaluation, and control shape performance in Dairy Agribusiness Small and Medium Enterprises in Murang'a County.

## **2.3 Empirical Literature Review**

### **2.3.1 Strategic Planning Process and Performance of Dairy Agribusiness SMEs**

Strategic planning refers to the systematic formulation of long-term goals, alignment of internal resources, and adaptation to external changes to improve an organization's overall performance (Shupyk, 2020). In the context of agribusiness SMEs, particularly in the dairy sector, strategic planning encompasses setting organizational vision, conducting market and risk analyses, defining performance targets, and selecting appropriate strategic options to ensure sustainability and competitiveness. Given the dynamic and resource-constrained environment in which these enterprises operate, especially in developing countries, effective strategic planning becomes essential for survival and growth.

In New Zealand, Khatami (2023) conducted a mixed-methods doctoral study examining the influence of strategic planning on dairy SME performance. The research sampled 45 dairy enterprises, using surveys and interviews to assess the presence of formalized planning practices and their impact on milk yield, market expansion, and environmental

resilience. The findings indicated that SMEs with documented, periodically updated strategic plans demonstrated stronger adaptive capacity, particularly in coping with price volatility and labor shortages. Furthermore, firms that integrated digital monitoring tools and stakeholder engagement into their planning processes recorded more consistent performance outcomes. However, Khatami cautioned that micro-enterprises often lacked the managerial capabilities and resources to institutionalize strategic planning, leading to reactive rather than proactive decision-making.

In India, Sarkar (2022) examined strategic planning behaviors among 176 milk producer organizations using structured surveys. The study identified key planning dimensions, including the frequency of plan revisions, stakeholder participation, and market analysis. Organizations with robust strategic planning mechanisms experienced higher profitability, better supply chain coordination, and increased farmer satisfaction. Sarkar also noted that organizations adhering to bottom-up planning approaches were more likely to attract development grants and technical assistance. Nevertheless, the research warned against a one-size-fits-all planning model, as context-specific governance norms significantly influenced how planning frameworks were implemented and perceived.

A study by Van Campenhout et al. (2021) in Uganda evaluated the effect of planning and coordination practices in dairy cooperatives using a multilevel econometric model. The study utilized data from 1,200 households linked to 41 dairy cooperatives and assessed how internal planning processes influenced productivity and cohesion. Cooperatives that practiced structured planning, including feed budgeting, scheduled training, and joint marketing, exhibited greater resilience to climate-related shocks and reported higher milk output and member retention rates. Importantly, the study highlighted the role of participatory leadership in enhancing the strategic planning process, arguing that inclusive governance was key to improving both planning quality and implementation

fidelity. Weaknesses were identified in resource-poor cooperatives, where planning remained aspirational due to capacity constraints.

Kimaro et al. (2021), studying 60 dairy cooperatives in Tanzania, assessed the effect of formal planning on milk productivity and marketing outcomes. Their survey-based study found that cooperatives with written strategic plans focused on investment prioritization, member training, and climate resilience initiatives outperformed their counterparts in milk yield and spoilage reduction. These cooperatives also demonstrated stronger market linkages and had more diversified income streams. However, the study found a pervasive lack of planning skills among cooperative managers, along with poor digital infrastructure, which limited effective strategy execution. The authors recommended enhanced technical training and government facilitation to bridge planning capacity gaps in the sector.

In Kenya, Muthee (2025) conducted an empirical study on strategic planning practices among dairy agribusiness SMEs in Murang'a County. Utilizing a descriptive cross-sectional design and structured questionnaires, the research targeted SME managers to determine how formal planning influences operational and financial outcomes. The findings indicated that enterprises with clear strategic goals, documented work plans, and performance benchmarks reported superior productivity, stronger customer loyalty, and greater readiness to access external financing. Moreover, strategic planning was associated with higher compliance with regulatory requirements and improved employee engagement. Nonetheless, the study noted that many SMEs lacked systems for monitoring and evaluating plan implementation, creating a gap between planning and performance.

Wanjala and Mukulu (2021) examined the effects of growth-oriented strategic planning on the performance of milk processing firms in Kenya. Drawing on data from 45 firms,

the study used regression analysis to examine the relationship between strategic plan quality and firm-level outcomes, including profitability, operational efficiency, and product diversification. The analysis revealed a statistically significant positive relationship between well-structured strategic plans and firm performance. Firms that incorporated scenario planning, stakeholder consultation, and competitive benchmarking into their planning processes showed stronger market positioning. However, the authors also identified that many SMEs treat strategic plans as compliance tools for funding applications rather than as instruments for guiding long-term decisions, thereby diluting their strategic value.

Njuguna et al. (2021), while primarily examining technology adoption among dairy farmers, provided critical insights into how strategic planning facilitates innovation in agribusiness SMEs. Using a sample of 312 smallholder dairy farmers, the study applied logistic regression to analyze the role of planning in shaping technology uptake. Results showed that farmers affiliated with cooperatives that practiced structured planning—such as scheduling trainings, goal setting, and progress tracking—were more likely to adopt modern feeding, breeding, and storage technologies. The study concluded that strategic planning enhances not only productivity but also institutional trust and adaptive learning among stakeholders. Challenges included low awareness of planning tools and minimal training support for cooperative leaders.

Okello and Luttah (2022) contributed additional Kenyan evidence through their structural equation modeling study on market orientation and dairy farm performance. Though the focus was on market responsiveness, strategic planning emerged as a key enabler of resilience and performance. The study found that farms with documented strategies for market engagement, customer feedback, and product innovation achieved higher financial returns and lower milk price volatility. Strategic planning facilitated

better supply alignment and reduced transaction costs through structured relationship management. The findings highlighted that planning processes rooted in real-time market intelligence and farmer participation yielded the highest performance dividends, especially under conditions of policy uncertainty and environmental stress.

### **2.3.2 Strategic Implementation Process and Performance of Dairy Agribusiness SMEs**

Strategic implementation refers to the phase in the strategic management cycle where formulated plans are translated into actionable initiatives, aligning resources, operations, and personnel with organizational goals (Thompson et al., 2021). For dairy agribusiness SMEs, this process encompasses translating business strategies into production activities, technology uptake, supply chain coordination, and workforce engagement, with the objective of improving operational efficiency, profitability, and competitive positioning. Implementation goes beyond task execution; it requires clear communication of goals, alignment of day-to-day operations with long-term objectives, and responsiveness to environmental feedback (Thompson et al., 2021). Weak implementation often explains why otherwise well-conceived strategies fail to achieve desired outcomes. Thus, the efficacy of strategic implementation directly influences performance dimensions such as productivity, market share, customer satisfaction, and sustainability among dairy SMEs.

Zhang et al. (2022) investigated how strategic implementation of lean and green practices influences performance in agri-food SMEs across China and Brazil. Using structural equation modelling on data from 214 firms, most of which were involved in dairy processing, the study demonstrated that SMEs that institutionalized implementation structures, such as staff training, performance monitoring, and inter-departmental coordination, realized measurable improvements in process efficiency and market responsiveness. Implementation success was contingent on leadership commitment,

cross-functional communication, and investment in human capital. However, the study noted that regulatory fragmentation and cultural resistance hindered the uniform adoption of implementation frameworks across firms. These findings underline the centrality of internal execution capabilities in bridging strategic planning and performance, a lesson applicable to dairy SMEs in Kenya grappling with weak operational systems and fragmented institutional support.

Theodoridis et al. (2022) evaluated the efficiency of dairy sheep farms across France, Spain, and Greece using Data Envelopment Analysis (DEA) as part of the EU-funded iSAGE project. The study found that farms with higher implementation capacity, as evidenced by timely strategy execution, consistent review of operational targets, and workforce engagement, reported superior efficiency scores in milk yield per input unit and overall cost-effectiveness. Critical to implementation was the use of real-time feedback systems to adjust inputs and labour allocation, ensuring operational agility. Further, the study noted that smallholder farms often lacked the capacity to sustain structured implementation due to limited technical knowledge and financial constraints. This gap highlights the importance of embedding implementation support tools, such as training and digitized tracking systems, into SME strategies, especially in Kenya's dairy sector, where similar smallholder characteristics prevail.

Rezende (2021) developed and piloted a strategic plan for a family-run dairy enterprise in Brazil, integrating Balanced Scorecard (BSC) and Objectives and Key Results (OKRs) into the implementation process. Using a participatory approach, the study applied internal analysis tools (SWOT and value chain mapping) to identify strategic priorities, which were operationalized through monthly staff meetings, cascading KPIs, and feedback-driven iteration. Implementation yielded improved service delivery, reduced customer churn, and enhanced alignment between operational routines and strategic

goals. However, limitations in scale and human resources constrained the full institutionalization of the strategic systems. The study's emphasis on structured implementation tools, especially KPIs and OKRs, is instructive for dairy SMEs seeking to convert strategy into sustained performance under capacity constraints.

Kimaro, Kisawike, and Ruoja (2021) assessed the influence of lean supply chain strategy implementation on performance among dairy firms in Tanzania's Iringa region. Through a descriptive cross-sectional survey of 60 employees in milk processing enterprises, the study found that implementing lean practices, such as demand forecasting, supplier coordination, and customer feedback systems, led to higher operational efficiency and cost savings. Implementation fidelity was enhanced where firms institutionalized training, delegated authority for execution, and monitored progress through clear reporting structures. However, infrastructure limitations and inconsistent stakeholder buy-in hindered the consistent application of strategic actions. This study illustrates that execution quality, not just strategy design, is vital to enhancing performance in dairy SMEs.

Legese et al. (2023), through the Ethiopia National Dairy Development Strategy (2022–2031), identified weak strategic implementation as a systemic bottleneck limiting the country's dairy sector growth. The paper emphasized that while the formulation of sectoral reforms was comprehensive, poor execution, particularly in areas such as animal health, genetic improvement, and milk hygiene regulation, led to underperformance. The study proposed a phased implementation roadmap involving multi-stakeholder coordination, capacity building, and structured monitoring frameworks to improve performance accountability. The Ethiopian case illustrates that even national strategies require localized implementation architecture to ensure impact at the enterprise level. This insight aligns with the Kenyan dairy sector, where national policies often fail to

translate into tangible SME-level outcomes due to limited institutional anchoring and execution support.

Koori, Kirimi, and Kihara (2017) analysed how strategy implementation influenced performance among dairy SMEs in Central Kenya, using a cross-sectional design on 60 enterprises. The study revealed that performance, as measured by technical efficiency scores and milk output per cow, was positively associated with the consistent implementation of strategic initiatives, such as improved feed management, recordkeeping, and cold-chain investments. Key facilitators of successful implementation included managerial commitment, internal communication, and regular operational reviews. However, implementation was constrained by limited access to credit and a lack of structured training. These findings reinforce the notion that, even in resource-constrained environments, implementation discipline remains a pivotal determinant of performance outcomes in dairy SMEs.

Kaara et al. (2021) examined the effect of implementing a differentiation strategy on the performance of dairy cottage industries in Murang'a County. The study used a descriptive survey of SMEs and found that firms that effectively implemented product innovation, branding, and value-addition strategies recorded higher sales growth and customer retention. Implementation success was underpinned by deliberate internal alignment of staff roles, consistent product testing, and integration of market feedback. However, many firms struggled with scaling innovations due to poor infrastructure and inadequate financing for sustained rollout. The findings illustrate the centrality of well-executed implementation routines in translating competitive strategy into measurable performance gains for dairy agribusiness SMEs.

### **2.3.3 Strategic Evaluation Process and Performance of Dairy Agribusiness SMEs**

The strategic evaluation process encompasses a systematic review of an organization's strategy execution to ensure alignment with performance objectives and the dynamic business environment (Grant, 2024). This process typically involves tracking key performance indicators (KPIs), assessing the outcomes of strategy implementation, and feeding this information back into decision-making to drive continuous improvement. In agribusiness SMEs, particularly within the dairy sector, strategic evaluation plays a vital role in determining whether performance targets such as productivity, profitability, efficiency, and market growth. Robust evaluation mechanisms often include monitoring systems, formal review protocols, benchmarking, and adaptive planning (Grant, 2024).

Yunani et al. (2019) examined the effects of strategic evaluation mechanisms on the performance of dairy cooperatives in Indonesia, using a quantitative survey of 150 cooperative managers. The study focused on evaluating how feedback loops, performance review meetings, and strategic dashboards contributed to operational efficiency and profitability. It found that cooperatives that institutionalized monthly strategic reviews outperformed others in milk quality, cost control, and member satisfaction. The research emphasized that evaluation success depended on participatory leadership and timely access to performance data. However, the study also highlighted significant limitations, particularly the over-reliance on internal evaluation without external benchmarking, which limited strategic adaptation in highly competitive markets.

Kallas et al. (2022), in a study of Spanish agrifood SMEs, examined how the use of data-driven evaluation tools affected strategy adjustment and firm performance. Using a mixed-methods approach combining semi-structured interviews and secondary performance data, the study revealed that regular strategic evaluation improved firm adaptability, innovation responsiveness, and revenue stability. Firms that integrated

customer feedback and KPI-based dashboards into evaluation cycles were more likely to refine strategies effectively, especially in response to market disruptions. Nonetheless, the researchers noted that most SMEs lacked a formal evaluation culture and dedicated personnel, which constrained continuous learning and mid-strategy adjustments. This underscores the critical role of capacity building in embedding evaluation processes in SME management systems.

Alemu et al. (2019) examined the impact of strategy monitoring and review in the dairy cooperative sector in Ethiopia using a qualitative case study of five leading cooperatives. Through interviews with cooperative leaders and document analysis, the study found that evaluation mechanisms, particularly performance review scorecards and strategic learning sessions, were directly linked to improvements in milk yield, supply consistency, and profitability. The study further noted that routine evaluations enabled cooperatives to reallocate resources more efficiently, cut down wastage, and align activities with market needs. However, challenges arose from managers' inadequate evaluation skills and a lack of standardized indicators across cooperatives. The study recommended national-level training programs and templates to support standardized evaluation practices within the sector.

In Tanzania, Mussa and Kapunda (2021) assessed the role of monitoring and strategic learning in enhancing performance among dairy processing SMEs using a quantitative approach, drawing on data from 120 enterprises. The study revealed that enterprises that conduct biannual strategic evaluations reported higher profitability, greater customer satisfaction, and improved market responsiveness. The use of scorecards, regular board reviews, and external audits was associated with enhanced decision-making and greater consistency in meeting performance targets. However, the study found that external donor dependence often distorted local evaluation priorities, leading MSMEs to focus on

donor-centric indicators rather than market-based KPIs. This highlights the need for localized and business-driven evaluation metrics.

Mwaura and Murage (2021) conducted a cross-sectional study on strategic evaluation practices among dairy agribusiness SMEs in Central Kenya, using structured interviews with SME managers. The findings indicated that firms that regularly assessed their strategic plans against real-time performance metrics such as revenue growth, unit cost, and customer retention performed significantly better than those that did not. Evaluation mechanisms like quarterly implementation audits, strategy-performance alignment matrices, and structured staff performance reviews contributed to greater transparency and timely adjustments. However, the study identified a lack of digital tools and skilled evaluators as barriers to the institutionalization of effective evaluation frameworks. It recommended digital upskilling and the integration of real-time performance dashboards to enhance data-informed evaluation processes.

Kariuki (2017) explored the role of evaluation and feedback systems in value chain performance among dairy SMEs in Murang'a County, using a descriptive survey of 80 enterprises. The study found that SMEs that adopted continuous feedback systems, including supplier evaluation and customer satisfaction tracking, demonstrated greater cost efficiency and repeat customer rates. Strategic evaluations that included external audits and benchmarking enabled the identification of performance gaps and promoted innovation. However, Kariuki noted that many SMEs lacked formalized evaluation protocols and often conducted reviews on an ad hoc basis, thereby reducing their potential for strategic learning. The study suggested that regulatory agencies and industry associations support standardized evaluation frameworks for SMEs.

#### **2.3.4 Strategic Control Process and Performance of Dairy Agribusiness SMEs**

The strategic control process is a critical component of strategic management, encompassing the establishment of performance standards, monitoring key performance indicators (KPIs), evaluating outcomes, and implementing corrective actions to ensure alignment with organizational goals (Grant, 2024). Strategic control processes are essential for navigating the complexities of volatile markets, resource constraints, and regulatory demands. These processes enable SMEs to enhance operational efficiency, improve product quality, and sustain competitive advantage, directly impacting performance metrics such as profitability, market share, and resilience.

Beber et al. (2021) investigated strategic actions for sustainable internationalization of dairy supply chains, comparing the Brazilian and German dairy industries through qualitative data from 64 expert interviews (26 in Brazil, 38 in Germany). The study emphasized the role of strategic control in enhancing competitiveness and sustainability, particularly for Brazilian dairy SMEs in the Grande Fronteira do Mercosul (GFM) region. The study identified that effective control mechanisms, such as quality monitoring systems and performance benchmarking, were pivotal for improving milk quality and operational efficiency.

The study found that SMEs adopting structured control processes, such as regular audits and quality-based payment systems, achieved better cost management and product standardization, positively impacting profitability and market competitiveness. However, the lack of digital tools and training hindered Brazilian SMEs' ability to sustain these controls, a challenge relevant to Kenyan dairy SMEs facing similar resource and technological constraints. The findings suggest that strategic control, when supported by training and technological adoption, can mitigate inefficiencies and enhance SME

performance, particularly in emerging markets like Murang'a County, where milk quality and supply chain coordination are critical.

Ramirez-Portilla and Torres Bermúdez (2023) conducted a competitive analysis of the Mexican dairy industry, focusing on innovation strategies for SMEs through a sectoral review and benchmarking of a market-leading firm. Using data from eight semi-structured interviews with senior managers and secondary sources, the study highlighted the importance of strategic control in fostering innovation and competitiveness. The study found that SMEs that systematically monitor market trends, consumer preferences, and technological advancements are better positioned to innovate their business models, leading to improved market share and profitability.

The study emphasized that strategic control processes, such as setting innovation performance metrics and evaluating supply chain efficiency, enabled SMEs to identify niche markets and adapt to consumer trends, such as the demand for healthy, natural products. These processes were linked to enhanced operational performance and customer satisfaction, as SMEs could align their offerings with market needs. The study underscores the need for SMEs to establish affordable control mechanisms, such as manual performance tracking or supplier collaboration, to support innovation and competitiveness.

Oyinbo and Hansson (2024) investigated the impact of balanced sustainability information on Swedish dairy farmers' preferences for grass-based feeding systems, using a discrete choice experiment with 375 farmers. The study reveals that information provision has negligible average effects on feed choices, suggesting limited influence on strategic decision-making to enhance SME performance. Farmers, averaging 52 years and managing 119 cows, prioritize animal welfare (willing to forgo 17% milk yield for high-welfare improvements) over other attributes such as GHG emissions reduction or

feed cost savings, indicating that strategic control must align with intrinsic values. Heterogeneous effects show that farmers with strong pro-environmental identities (a 6% milk yield trade-off for biodiversity) and those without grass-related training are more responsive, highlighting the need for targeted information strategies. The null average effect, possibly due to opposing responses or cognitive biases, suggests that strategic control processes relying solely on information may fail to drive sustainable transitions in SMEs. Repeated, tailored interventions addressing farmer identities and knowledge gaps could better support performance by fostering adaptive strategies.

Another study by Zanin et al. (2020) examined sustainability in dairy farming in the western region of Santa Catarina, Brazil, applying the Triple Bottom Line (TBL) framework to assess economic, social, and environmental dimensions. Utilizing structural equation modeling (SEM) with data from 54 rural farms, the research tests four hypotheses on sustainability drivers: public policies for producers, supply chain policies, production technique improvements, and management practices. Results indicate that management practices significantly enhance social ( $p = 0.001$ ) and economic sustainability ( $p < 0.001$ ), while improvements in production techniques positively impact environmental sustainability ( $p = 0.019$ ). Public policies supporting producers influence economic sustainability ( $p = 0.039$ ), but supply chain policies show no significant effect ( $p > 0.05$ ). The second-order SEM reveals economic sustainability as the most prominent dimension, with environmental concerns less prioritized, consistent with literature highlighting economic priorities in small-scale farming. The study underscores the critical role of management and technological advancements in promoting sustainability, though its small sample limits generalizability.

Tadele et al. (2025) reviewed the potential of Precision Dairy Farming (PDF) to transform Africa's dairy sector, emphasizing its role in enhancing sustainability,

productivity, and economic viability. The study integrates advanced technologies like wearable sensors, automated milking systems, and mobile apps, achieving a 30% increase in milk yield, 25% reduction in feed costs, and 20% decrease in veterinary expenses. Despite these benefits, adoption in Africa faces challenges, including high technology costs, infrastructural limitations, low digital literacy, and policy constraints. Opportunities include improving animal health, empowering smallholders through digital solutions, and meeting growing dairy demand. Case studies, such as Kenya's Dairy Development Program and Ethiopia's Heifer International Program, demonstrate significant yield improvements (20–60%) through mobile apps, artificial insemination, and cooperative models. The study proposes pathways like subsidies, public-private partnerships, and localized technology development to overcome barriers, advocating for a roadmap to ensure sustainable dairy production in Africa.

Zorn and Zimmert (2022) examined structural changes in Swiss dairy farming, focusing on farm exits and transitions to suckler cow farming, using logistic regression on administrative data from 2000 to 2018. The study analyzes 441,281 observations from 29,754 farms, with 2% exiting and 0.3% switching to suckler cow production. Older farmers (mean age 52.1 years for exiting farms vs. 44.9 for staying) are more likely to exit, while younger farmers (mean age 43.3 years for type changers) are more prone to switch. Larger farms, measured by herd size (mean 16.3 cows overall, 11.9 for existing farms) or employees (13% of farms have non-family workers), show lower exit probabilities. Organic farms (12% of the sample) and those adhering to animal welfare standards (75% free-range, 35% housing system) have reduced exit rates but a higher likelihood of switching to suckler cow farming. Specialized farms (Herfindahl-Hirschman index 0.443 for exiting vs. 0.411 for staying) face higher exit risks. Direct payments (mean 47,783 CHF, 42% of standard output) stabilize farms, lowering exit

probabilities. Farms in PDO cheese regions (20% of observations) show higher exit rates, possibly due to land competition. Policy reforms, particularly the 2009 milk quota abolition, increased exits but had no significant effect on type changes. The study suggests targeted policies, such as exit incentives for older farmers and diversification support for younger farmers, to manage structural change while balancing economic and environmental objectives.

Nybom et al. (2021) investigated how Swedish farmers' perceptions of competitive intensity (CI) influence their strategic orientations, lean production orientation (LPO), entrepreneurial orientation (EO), and market orientation (MO), and the impact on subjective performance (SP) in dairy agribusiness SMEs. Using a structural equation model with data from 388 randomly selected farmers, the study finds that increased CI significantly enhances LPO (standardized coefficient 0.32,  $p < 0.05$ ) and MO (0.35,  $p < 0.05$ ), supporting hypotheses H1 and H3, but not EO (-0.03, non-significant), rejecting H2. Regarding performance, MO has the strongest positive effect on SP (0.27,  $p < 0.05$ ), followed by LPO (0.12,  $p < 0.05$ ), supporting H4 and H6, while EO unexpectedly shows a negative effect (-0.18,  $p < 0.05$ ), rejecting H5. These findings suggest that in highly competitive environments, Swedish dairy SMEs prioritize efficiency (LPO) and customer-focused strategies (MO) over risky entrepreneurial ventures, which may detract from performance due to resource constraints or risk aversion. Strategic control processes should focus on strengthening market intelligence and standardized routines to enhance SME performance, while cautiously approaching high-risk entrepreneurial strategies.

Zorn and Zimmert (2022) analyze structural changes in Swiss dairy farming, focusing on farm exits and transitions to suckler cow farming, using logistic regression on 2000–2018 data from 29,754 farms (441,281 observations). The study reveals that older

farmers (mean age 52.1 years) are more likely to exit, while younger farmers (mean age 43.3 years) shift to less labor-intensive suckler cow farming, highlighting age as a critical control factor for SME viability. Larger farms (mean 16.3 cows) and those with employees (13%) exhibit lower exit risk, underscoring scale and resource optimization as performance drivers. Organic (12%) and animal welfare practices (75% free-range) reduce exits but increase type changes, indicating strategic differentiation enhances stability but may limit growth. High specialization (Herfindahl-Hirschman index of 0.443 vs. 0.411) increases exit risk, suggesting that diversification mitigates volatility. Direct payments (47,783 CHF) stabilize SMEs, while PDO regions (20%) experience higher exit rates due to land competition. The 2009 milk quota abolition increased exits, underscoring policy impacts. Strategic control should monitor demographics, scale, and diversification, leveraging subsidies and quality schemes to boost SME performance.

Ajak et al. (2020) assessed dairy cattle productivity in smallholder farms in Nyeri County, Kenya, focusing on feed resources, breeding, calf management, and reproductive and productive performance. In the context of strategic control processes and performance of dairy agribusiness SMEs, the study highlights critical constraints impacting SME efficiency. Most farmers (74.2%) use intensive stall-feeding systems with Napier grass, concentrates, and mineral supplements (87.2%), but face feed shortages (30.6%) and high concentrate costs (17.8%), limiting productivity. Friesians dominate (82.2%), with 94.5% using artificial insemination; however, reproductive performance is suboptimal, with a mean age at first calving of 28.7 months, a calving interval of 15.2 months, and 58.6% conceiving at first service. Milk yield averages 10.7 liters/cow/day, significantly below potential due to feed scarcity and low farmgate milk prices (28.3% cited as a challenge). Linear regression shows a positive correlation (coefficient 0.247,  $p=0.001$ ) between concentrate feeding in early lactation and milk

yield, while diseases and breeds negatively affect output. The study determined that strategic control processes must address feed availability, cost management, and farmer training to enhance SME performance, as poor nutrition and inadequate knowledge hinder sustainable growth.

### **2.3.5 Performance of Dairy Agribusiness SMEs**

Performance in Dairy Agribusiness Small and Medium Enterprises refers to the measurable outcomes that reflect the effectiveness and efficiency of enterprise operations, including product quality, productivity, market growth, profitability, and service reliability. In the dairy industry, performance is shaped by enterprises' ability to manage production processes, maintain consistent milk quality, coordinate supply chains, comply with regulatory standards, and respond to variable market conditions. Empirical studies consistently show that performance in dairy enterprises depends not only on operational efficiency but also on the strength of internal management systems that support decision making, resource utilisation, and quality assurance (Mutinda and Rao, 2021). Performance, therefore, represents an integrated construct that captures financial results, operational stability, market competitiveness, and customer satisfaction within dairy value chains.

Recent empirical evidence shows that internal managerial capabilities and organisational processes strongly influence dairy enterprise performance. Otieno and Gicheha (2021) report that dairy firms with stronger managerial structures achieve greater consistency in supply coordination and higher profitability through improved resource planning and operational discipline. Similarly, Kwamboka et al. (2022) found that enterprises that integrate structured management practices into their daily operations experience fewer losses, higher adherence to quality standards, and improved market access. Njogu and Murigi (2023) observe that growth strategies such as innovation and process optimisation

significantly enhance performance in milk processing enterprises, reinforcing the role of internal strategic capabilities in shaping outcomes. These findings demonstrate that performance in dairy SMEs is directly linked to the quality of internal decision-making and the effectiveness of operational systems.

Studies conducted in Kenya further confirm that enterprise performance in the dairy sector is influenced by firms' capacity to manage internal processes in response to environmental demands. Ndung'u et al. (2023) found that milk processors adopting strategic sourcing and structured supplier management practices experience improved product consistency, reduced waste, and enhanced financial stability. Omore et al. (2022) emphasise that performance in Kenyan dairy enterprises is linked to the ability to maintain hygiene, meet safety standards, and manage production variability, all of which require strong internal organisational capabilities. Findings from the Kenya Dairy Board (2022) also indicate that enterprises with better governance systems and documented operational routines exhibit higher levels of compliance and market competitiveness. Collectively, these studies highlight that performance in the dairy sector is closely tied to organisational quality and strategic capability rather than external factors alone.

Empirical studies conducted by ILRI, FAO, and SNV further reinforce the importance of internal processes for enterprise performance in dairy value chains. ILRI (2021) found that enterprises with stronger management practices achieve higher productivity and reduced spoilage because they are better positioned to coordinate supply chains and enforce quality standards. The FAO Dairy Value Chain Assessment (2021) similarly reports that performance is significantly affected by firms' ability to implement routine monitoring, maintain production records, and align operations with market requirements. SNV (2021) highlights that dairy SMEs that invest in operational control and performance measurement tools are more likely to meet processor requirements and

sustain market linkages. These findings underscore the importance of structured management processes in driving enterprise performance across dairy value chains.

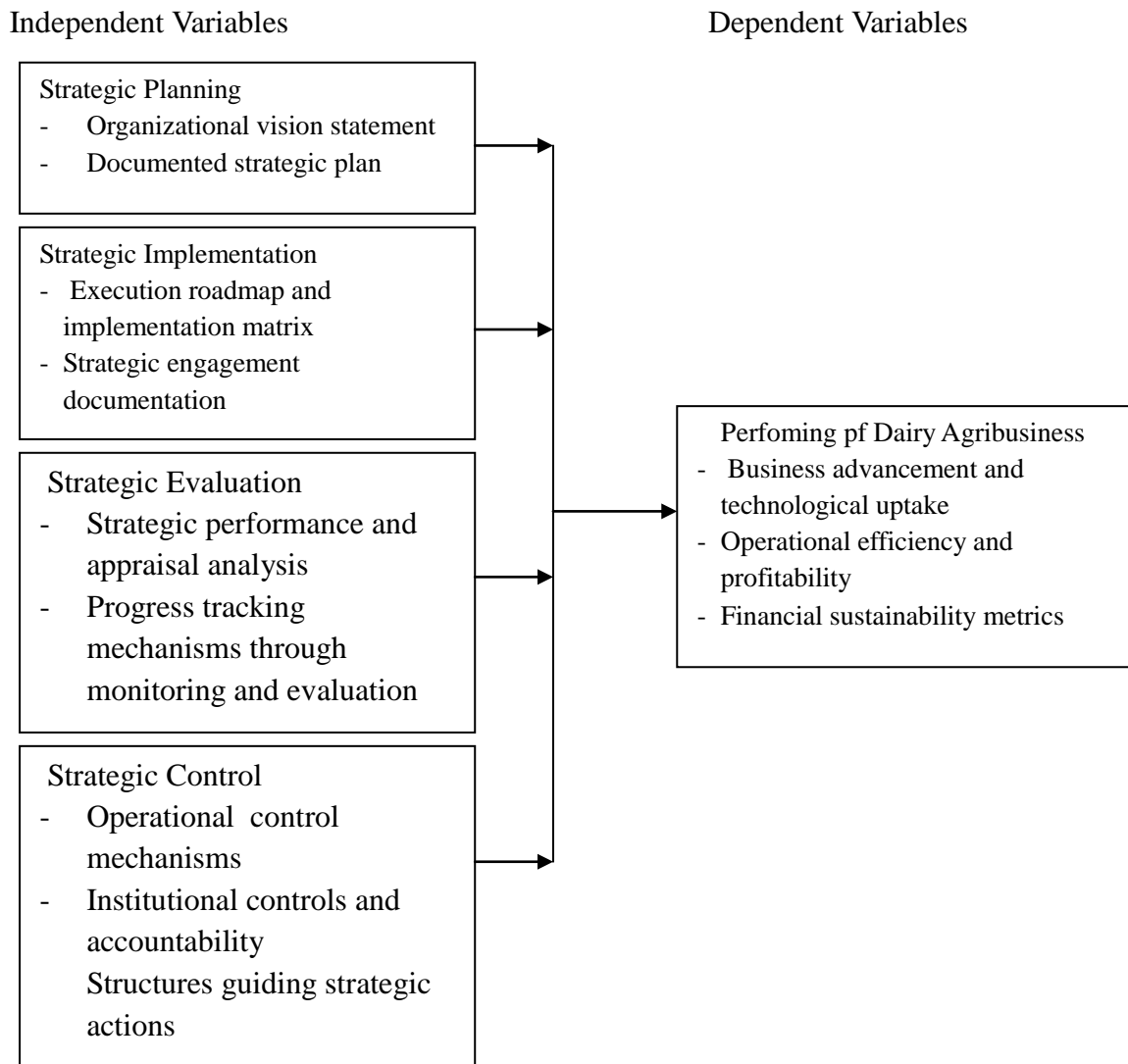
Across contexts, empirical studies confirm that performance in dairy SMEs is multidimensional and closely linked to the managerial strength of the enterprise. Key performance indicators often include milk throughput, production efficiency, revenue growth, adherence to safety and hygiene standards, customer retention, and consistency of supply. Studies across East Africa show that enterprises with stronger coordination mechanisms and clearer managerial roles perform better than those operating informally or without structured processes (Mutinda and Rao, 2021; Kwamboka et al., 2022). The literature therefore demonstrates that performance is not merely an outcome of resources or market opportunities but a reflection of how well an enterprise manages its internal systems, adapts to environmental demands, and maintains operational discipline.

## **2.4 Conceptual Framework**

The conceptual framework guiding this study was anchored in the understanding that the effectiveness of strategic management processes primarily influences the performance of dairy agribusiness SMEs. In this framework, firm performance was conceptualized as the dependent variable, determined by four key independent variables: strategic planning, strategy implementation, strategy evaluation, and strategic control. These capabilities are posited to strengthen or weaken the relationship between strategic management processes and performance outcomes, thereby shaping the extent to which strategic efforts translate into tangible improvements in efficiency, competitiveness, and growth among dairy agribusiness SMEs in Murang'a County.

**Figure 1**

*Conceptual Framework*



*Source:* Author, (2024)

**2.5 Research Gaps**

The literature review has identified several research gaps in the existing body of knowledge regarding the effects of strategic management processes on the performance of Dairy Agribusiness SMEs. While various studies have explored the relationship between strategic management and organizational performance, there is a scarcity of research specifically focusing on the unique context of Dairy Agribusiness SMEs in

Kenya. The following table highlights the key research gaps identified in the literature review, along with the relevant studies and their limitations in addressing the specific objectives of the current study.

**Table 1**

*Research Gaps*

Study (Author and Year)	Focus	Limitations / Research Gaps Identified
Ajak et al. (2020)	The research evaluated productivity levels in smallholder dairy farms in Nyeri County, focusing on breeding, feeding systems, and reproductive indicators such as milk yield and calving intervals.	Although the study provides essential baseline data on production performance, it does not incorporate any dimensions of strategic management processes that could explain or enhance productivity outcomes. Furthermore, since the study was conducted in Nyeri County, its findings may not fully reflect the operational or strategic realities of dairy SMEs in Murang'a County.
Atanaw et al. (2022)	Used structural equation modeling (SEM) to analyze how farm management practices (feed, hygiene, education) affect dairy productivity in Amhara, Ethiopia.	While the use of SEM provides robust statistical analysis, the study primarily focuses on operational and environmental variables rather than strategic management practices. It also omits variables such as strategy implementation or performance evaluation, making it insufficient for assessing the full spectrum of strategic processes in SMEs.
Beber, Lakner & Skevas (2021)	Assessed technical efficiency in dairy processing firms in Southern Brazil, comparing cooperatives and investor-owned firms using a Bayesian frontier model.	While the study offers valuable insights into organizational forms and efficiency, it is based in a Latin American context with mature processing infrastructure, making its findings less transferable to smallholder-driven dairy SMEs in rural Kenya. Moreover, the study's emphasis on processing firms overlooks upstream strategic management processes such as planning or control within primary production SMEs.
Blackmore <i>et al.</i> (2021)	This study examined the regulatory gap between Kenya's informal milk markets and the formal policy environment, employing mixed-methods to evaluate governance and safety practices among informal actors in Nairobi.	While the study offers rich contextual analysis of the informal dairy market and its governance challenges, it does not examine firm-level strategic decision-making or performance outcomes. Its focus on policy and regulation also diverges from the strategic management lens required to assess SME performance, and its Nairobi-based data collection may not be generalizable to rural agribusiness SMEs in Murang'a.
Bojovic (2021)	Assessed strategic flexibility and resilience in New Zealand's dairy sector in the face of global disruptions.	Though highly relevant in terms of strategic themes, the study's unit of analysis is national and corporate-level actors. It does not examine how strategic flexibility is operationalized at the SME level, particularly within resource-constrained settings like those in Kenya's informal and semi-formal dairy sectors.

Study (Author and Year)	Focus	Limitations / Research Gaps Identified
Gakuu et al. (2018)	Studied the role of M&E planning, team strengthening, and communication on performance in dairy primary cooperatives in Murang'a.	The study's emphasis on cooperatives and M&E structures does not capture the diversity and complexity of strategic management in private dairy SMEs, especially in a competitive market environment like Murang'a County. Additionally, it overlooked sector-wide dynamics such as innovation, market orientation, or entrepreneurial strategies.
Khatami (2022)	Explored portfolios of risk management strategies among New Zealand dairy farmers, including debt and liquidity management.	Although the study provides an in-depth understanding of financial risk strategies, it is primarily focused on large-scale New Zealand dairy operations, which differ significantly in structure and resource availability compared to SMEs in Murang'a. The findings cannot be directly transferred due to contextual differences in scale, market dynamics, and financial ecosystems.
Kibunja, Mavole & Okuku (2020)	This study explored the influence of organizational structure on the performance of dairy cooperatives in Murang'a County, using a sequential explanatory design.	While the study provides valuable insights into cooperative structures, it does not address broader strategic management processes such as planning, implementation, or control. Moreover, by focusing solely on cooperatives, it excludes privately owned SMEs, thereby limiting the applicability of its findings to the wider spectrum of agribusiness enterprises in Murang'a County.
Marwa et al. (2021)	Analyzed the diffusion of agricultural innovations among dairy farmers in sub-Saharan Africa using an institutional lens.	While the study addresses adoption behavior, it does not explore how structured strategic management processes influence performance outcomes. It also lacks specific application to the Kenyan dairy sector and does not examine organizational-level strategies such as evaluation, control, or planning.
Muthee et al. (2023)	The study analyzed the adoption of precision dairy farming technologies among smallholder farmers in Kenya, emphasizing technological capacity and productivity potential.	Although the study contributes to understanding innovation in the dairy sector, it does not address how strategic planning, implementation, or evaluation processes influence performance outcomes. The focus on technology adoption excludes organizational and managerial variables that are critical to understanding SME performance holistically.
Muthee et al. (2025)	Investigated the effect of monitoring and evaluation (M&E) planning on the performance of dairy processing projects in Murang'a County.	While the study offered strong statistical evidence linking M&E planning to performance, it was limited to dairy processing projects and did not consider broader strategic management processes such as implementation or control. This narrow focus excludes other performance influencers, making it insufficient for understanding strategic management holistically among dairy agribusiness SMEs.
Muthee et al. (2025) [Second Mention]	Provided an industry overview and empirical results on dairy processing projects' performance in the wake of sector consolidation and liberalization.	The research presented a robust macro-level analysis but lacked firm-level strategic nuances such as internal strategic control and managerial decision-making practices, which are vital for understanding SME-level performance outcomes.

Study (Author and Year)	Focus	Limitations / Research Gaps Identified
Nduta, Gakuu & Luketero (2018)	Assessed the influence of M&E strategies and management support on the performance of dairy primary cooperatives in Murang'a County.	The study was confined to cooperative societies and did not explore privately run or independent dairy SMEs, which may operate under different strategic and governance conditions. Furthermore, the research did not address strategic planning or control mechanisms critical for SME competitiveness.
Njoroge (2018)	Explored M&E strategies, management support, and their effect on dairy primary cooperative societies' performance in Murang'a County.	Although comprehensive in M&E dimensions, the study lacked focus on the broader strategic management framework, particularly excluding strategic planning, implementation, and control processes that are crucial for holistic organizational performance evaluation.
Oyinbo & Hansson (2024)	Explored dairy farmers' preferences for sustainability-linked information provision in Sweden using discrete choice experiments.	This study provides behavioral insights from European farmers in developed contexts, which may not be applicable to resource-constrained dairy SMEs in Kenya. Furthermore, it centers on sustainability preferences rather than strategic decision-making or enterprise performance.
Quayson et al. (2022)	Investigated the role of digitalization and innovation in transforming African agri-food systems, with case examples on blockchain and smart farming technologies.	The study focuses broadly on digital transitions in agri-food systems without delving into strategic management practices or performance metrics specific to dairy agribusiness SMEs. Its continental scope provides limited actionable insights for regionally grounded strategic interventions in Murang'a County.
Ramesh & Taneja (2020)	Investigated production efficiency and constraints in Indian dairy farms using stochastic frontier models.	The study emphasizes production efficiency without integrating broader strategic management dimensions such as planning or evaluation. It lacks alignment with performance metrics influenced by managerial strategy, limiting its applicability to SMEs focused on competitive advantage.
Ramirez- Portilla & Torres Bermúdez (2023)	Conducted a competitive analysis to support innovation strategy formulation in Mexican dairy SMEs, emphasizing benchmarking and strategic adaptation.	Although the study contributes to understanding innovation strategy within dairy SMEs, its findings are grounded in the context of the Mexican market and focus heavily on innovation-driven competitiveness rather than broader strategic processes like evaluation or implementation. The transferability of lessons to rural Kenyan SMEs, especially in dairy agribusiness, is constrained by systemic, economic, and infrastructural differences.
Róžańska- Boczula et al. (2021)	Analyzed internal structures of agricultural holdings in EU countries using multivariate classification methods.	This study's statistical orientation and macro-level focus overlook enterprise-level strategic practices. The typologies generated are not linked to firm performance or strategy processes, and the scope excludes SMEs in the African context, thereby reducing its relevance to Murang'a-based agribusiness SMEs.

Study (Author and Year)	Focus	Limitations / Research Gaps Identified
Rugeles & Nuñez (2021)	Evaluated sustainability performance in dairy SMEs through digital monitoring frameworks in Colombia.	The study focuses on sustainability indicators and digital system adoption rather than the broader strategic management framework. Moreover, the digital infrastructure and institutional context in Colombia differ significantly from Kenya, limiting direct relevance to SMEs in Murang'a's dairy sector.
Sarkar et al. (2022)	Examined the impact of dairy cooperatives on milk producers' welfare in India.	While insightful on collective marketing and income improvements, the study is rooted in cooperative structures and fails to capture strategic decision-making at the individual SME level. Moreover, its socio-economic and regulatory setting diverges from Kenya's dairy agribusiness landscape.
Singh (2022)	Analyzed dairy trade expansion strategies from New Zealand into gateway cities in Asia and the Middle East.	The study focuses on macro-level export strategy and market expansion rather than firm-level strategic management processes. It does not explore internal planning, implementation, or control mechanisms that drive performance at the SME level, particularly within domestic value chains like those in Kenya.
Świtlyk, Sompolska-Rzechuła & Kurdyś-Kujawska (2021)	Measured economic and technical efficiency and productivity of Polish dairy farms using DEA and Färe–Primont indices across 2008–2017.	This study emphasizes quantitative measurement of input-output efficiency without integrating strategic management processes such as planning or control. Furthermore, its European context, particularly within the subsidized EU framework, limits its practical applicability to SMEs in Kenya that face distinct operational and policy environments.
Tadele et al. (2025)	Reviewed the potential, challenges, and opportunities of precision dairy farming (PDF) in Africa, highlighting digital tools and technological adoption for sustainable milk production.	Although the study offers a comprehensive overview of precision technologies, it lacks empirical testing and does not analyze how strategic management processes at the SME level facilitate or hinder the adoption of these innovations. The review format also limits contextualization to specific regions such as Murang'a County.

Most existing studies on strategic management and enterprise performance in Kenya have largely focused on the industrial, service, and agricultural cooperative sectors, with minimal empirical focus on agribusiness SMEs operating in rural county contexts such as Murang'a. This has left a significant knowledge gap in understanding how structured strategic management processes shape the operational efficiency and competitive advantage of dairy-based enterprises, which function differently from both primary producers and large-scale processors. Earlier studies also tended to focus on strategy formulation outcomes rather than the full continuum of processes such as planning,

implementation, evaluation, and control, thus overlooking how managerial sequencing, resource allocation, and feedback mechanisms interact to influence enterprise performance. This study addresses these omissions by systematically analyzing each strategic management process as an independent yet interlinked construct and assessing its measurable effect on performance indicators relevant to dairy agribusiness SMEs.

In addition, previous literature often generalized findings across sectors without considering the contextual realities and constraints of dairy agribusinesses in devolved economies. Murang'a County presents a unique operational environment characterized by a high concentration of small and medium dairy enterprises, fluctuating milk markets, limited access to financial and technological resources, and evolving policy frameworks governing agribusiness operations. By situating the analysis within this specific context, the study contributes locally grounded evidence on how strategic processes can enhance adaptability, productivity, and sustainability under these constraints. The findings are expected to fill the empirical gap in SME strategy research by linking management process efficiency to enterprise performance outcomes, while also offering actionable insights for policymakers, investors, and development actors working to strengthen Kenya's dairy agribusiness ecosystem.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter provides an outline of how data was collected, analyzed, and presented. It outlines the applied research design, target population, sampling methods, data collection procedures, sample size determination, data collection tools, and data analysis.

#### **3.2 Research Design**

The study adopted a cross-sectional design. This involves looking at data from a population at one specific point in time. Creswell (2014) states that the advantage of employing a cross-sectional design lies in the ability to compare multiple variables simultaneously. This survey design helped gain insights into the general picture of Dairy agribusiness SMEs in Murang'a County by drawing on information from the sampled SMEs. This research design was appropriate because it allows the researcher to combine qualitative and quantitative techniques in data collection and analysis.

#### **3.3 Location of the Study**

Mugenda & Mugenda (2003) define the study population as an entire group of individuals or objects that share common observable characteristics. The study was conducted in Murang'a County, located in the central region of Kenya, approximately 85 kilometers north of Nairobi. Geographically, the county lies between latitudes 0°34' South and 1°07' South and longitudes 36° and 37°27' East, covering an estimated area of 2,558 square kilometers. It borders Nyeri County to the north, Kirinyaga to the northeast, Embu to the east, Kiambu to the south, and Nyandarua to the west. The topography is characterized by steep highlands on the western side and low-lying areas toward the east, with altitudes ranging between 914 meters and 3,353 meters above sea level. This variation gives rise to distinct agro-ecological zones that support intensive crop and

livestock production. The county experiences a bimodal rainfall pattern, averaging 1,200 millimeters annually, and maintains fertile volcanic soils ideal for dairy farming (Murang'a CIDP 2023–2027).

Administratively, Murang'a County comprises seven sub-counties, thirty-five wards, and a population of approximately 1.05 million people (Kenya National Bureau of Statistics [KNBS], 2019). The economy is predominantly agrarian, with agriculture employing nearly 72 percent of the county's labor force (Kenya Institute for Public Policy Research and Analysis [KIPPRA], 2024). Among agricultural enterprises, the dairy subsector is particularly significant, contributing substantially to household incomes, local employment, and industrial linkages. The county hosts more than 326,000 dairy cattle and numerous farmer cooperatives and small- and medium-sized enterprises (SMEs) involved in milk bulking, processing, transportation, and retailing. Notable actors include Wakulima Dairy Cooperative, Murang'a County Creameries (MCC), and several privately owned processors and distributors.

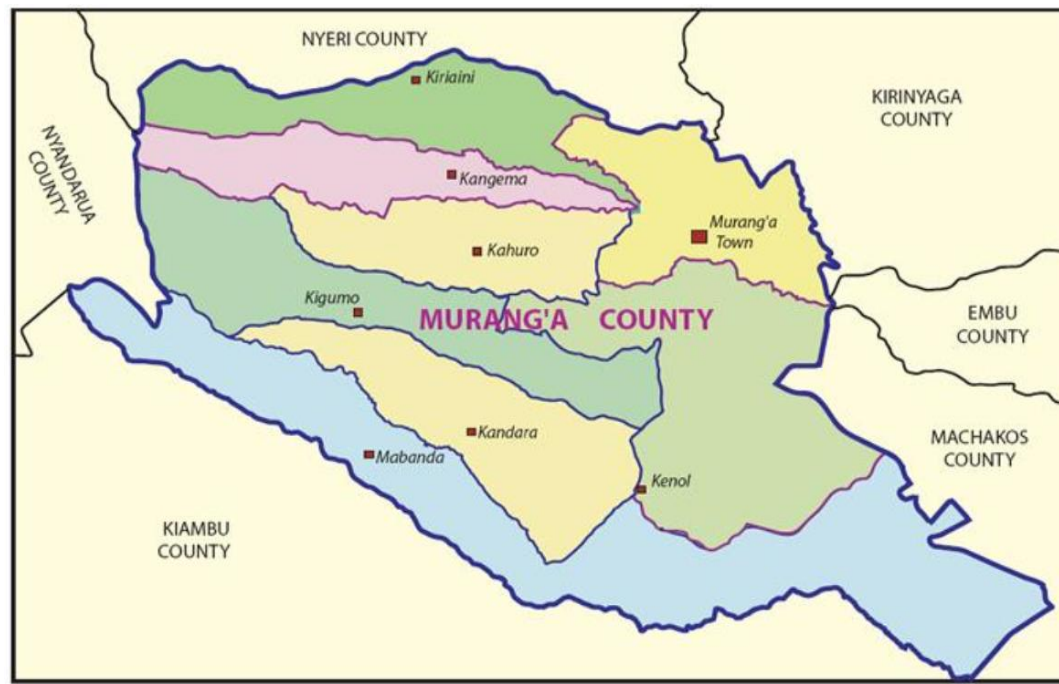
Murang'a County forms part of Kenya's Central Dairy Corridor, a region known for consistent milk supply to urban processors in Nairobi and Thika. Its proximity to major urban markets, relatively developed road network, and concentration of value-chain actors create an environment where strategic management practices are critical for firm competitiveness and sustainability. The presence of government-supported programs—such as milk-cooling infrastructure, artificial insemination subsidies, and cooperative-strengthening initiatives further enhances its suitability as a study site.

The choice of Murang'a County was therefore purposeful. It reflects a setting where dairy agribusiness SMEs operate under conditions of moderate competition, fluctuating input costs, and evolving institutional support systems. These features provide an appropriate context for examining how strategic management processes—including

formulation, implementation, evaluation, and control—influence the performance of dairy agribusiness SMEs. The county’s sectoral diversity, accessibility, and economic relevance make it both a representative and analytically rich location for this investigation.

**Figure 2**

*Map of Murang’a County*



### **3.4 Target population**

The target population refers to the entire group of individuals or entities to which the study's results are intended to be generalized. It forms the foundation for designing an appropriate sampling strategy and informs data collection procedures (Creswell & Creswell, 2017). In this study, the target population comprised forty (40) dairy agribusiness Small and Medium Enterprises (SMEs) officially registered with the Kenya Dairy Board (KDB) and operating within Murang’a County, Kenya. These enterprises are actively involved in milk production, bulking, or marketing. To capture a holistic view of strategic management practices within each firm, four key staff members were

selected from each MSME. These included individuals directly engaged in strategic roles such as marketing officers, finance officers, or quality assurance personnel, resulting in a total sample of 160 respondents. This approach ensured comprehensive and multi-dimensional insights into the strategic processes influencing firm performance (see Appendix III for the complete list of dairy SMEs).

### **3.5 Sample Size and Sampling Procedure**

Since the study sought to examine all registered dairy agribusiness SMEs in Murang'a County, a census approach was adopted rather than a sample-based method. This ensured full coverage of the population and eliminated the risk of excluding relevant enterprises whose characteristics could influence the study results. From each of the forty firms identified in the sampling frame, four respondents were selected to participate. The choice of four was guided by the need to obtain a balanced and comprehensive view of each enterprise's strategic management processes from multiple functional perspectives.

In most dairy agribusinesses, key strategic decisions are collectively influenced by individuals overseeing management, production, quality control, marketing, and finance. Including one respondent from each of these functional areas enabled the study to capture insights from both operational and managerial levels, yielding more nuanced and credible findings. This approach also recognized that relying on a single respondent per firm could lead to biased or incomplete information, particularly in enterprises where responsibilities are distributed across different departments. By engaging four respondents, the study achieved internal triangulation within each firm, validating responses across roles and thereby enhancing the reliability of the collected data. The total of 160 respondents reflected a deliberate effort to obtain diverse yet directly relevant perspectives on how strategic management processes influence performance in dairy agribusiness SMEs within Murang'a County.

### **3.6 Instrumentation**

In this study, the primary data collection tool was a structured questionnaire. This questionnaire was designed to align with the research objectives, which sought to investigate the strategic management processes of medium-sized dairy agribusinesses and their impact on performance. The questionnaire was a suitable choice for this study for several reasons. Firstly, it allows us to collect quantitative data efficiently, which is essential for analyzing and quantifying the relationships between strategic management processes and performance (Cheung, 2014).

Secondly, it provided a standardized format for data collection, ensuring consistency in responses across all participating agribusinesses. This uniformity in data collection was crucial for the reliability and validity of our findings. Additionally, the questionnaire format was non-intrusive, allowing participants to respond at their convenience, which is especially important for busy professionals in the agribusiness sector (Cheung, 2014).

The questionnaire questions were structured to capture firm characteristics, strategic planning and performance, strategy implementation and performance, strategy evaluation, and strategic control and performance.

These sections were crafted to ensure that the study collects relevant data that directly addresses its research objectives. The Likert scale was employed to measure the extent to which respondents agree or disagree with statements or the perceived importance of statements. The scale ranged from 1 to 5, with 1 representing "strongly disagree" and 5 representing "strongly agree." This scale enabled quantification of respondents' opinions and perceptions across various aspects of strategic management processes and performance in agribusinesses.

### 3.6.1 Reliability

Reliability of the research instruments was assessed using Cronbach's alpha to evaluate the internal consistency of the items measuring each construct. A pilot study was conducted with a small group of Dairy Agribusiness Small and Medium Enterprises in a neighbouring county to test the instrument before full administration. Cronbach's alpha values were computed for each of the five scales corresponding to the strategic planning process, strategy implementation process, strategy evaluation process, strategic control process, and performance. According to widely accepted thresholds, a coefficient of 0.70 or above indicates acceptable internal consistency for social science research (Nunnally and Bernstein, 1994).

The pilot results showed that all constructs exceeded this minimum threshold, confirming that the items within each scale were reliably measuring the same underlying dimension. Minor wording adjustments were made to items with borderline values to enhance clarity and respondent comprehension. The satisfactory reliability coefficients provided confidence that the instruments were suitable for generating consistent and dependable data for the study.

**Table 3**

*Reliability Test Results*

Construct	No. of Items	Cronbach's $\alpha$
Strategic Planning	10	0.87
Strategy Implementation	10	0.85
Strategy Evaluation	10	0.83
Strategic Control	10	0.84
Performance	10	0.88

All constructs achieved Cronbach's alpha coefficients above the 0.70 threshold, indicating high internal consistency of the items used to measure each dimension. Strategic Planning ( $\alpha = 0.87$ ) and Performance ( $\alpha = 0.88$ ) exhibited the strongest reliability, while Strategy Evaluation ( $\alpha = 0.83$ ) and Strategic Control ( $\alpha = 0.84$ ) also showed robust item coherence. These results confirm that the Likert-scale items within each section of the questionnaire reliably capture their intended constructs, supporting the validity of subsequent descriptive and inferential analyses.

### **3.6.2 Validity**

Validity is a critical concept in research, reflecting the extent to which the results of data analysis accurately reflect the characteristics of the broader population under investigation (Greener, 2008). A facet of validity known as content validity plays a pivotal role in assessing an instrument's comprehensiveness in encompassing all pertinent dimensions of the construct it seeks to gauge. Content validity of the research instruments was ensured through a systematic expert review process designed to confirm that all questionnaire items adequately represented the constructs under investigation.

The initial draft of the instrument was shared with three subject matter experts in strategic management and agribusiness research, drawn from accredited academic institutions. These experts assessed the clarity, relevance, and completeness of the items measuring the strategic planning process, strategy implementation, strategy evaluation, strategic control, and performance of Dairy Agribusiness Small and Medium Enterprises. Their comments guided the refinement of ambiguous statements, the removal of overlaps, and the rewording of items that did not closely align with the study variables. To further strengthen validity, the instrument was reviewed by two practitioners from Dairy Agribusiness SMEs in Murang'a County who assessed whether the items reflected real managerial processes in the sector. Based on their feedback, minor adjustments were

made to ensure practical relevance and alignment with the sector. This iterative process of expert and practitioner validation ensured that the final instrument was comprehensive, clear, and appropriate for measuring the intended constructs.

### **3.6.3 Piloting**

A pilot study is a small-scale preliminary investigation used to test and refine the data collection instruments and procedures before the main study (Pearson et al., 2020). It helps to identify potential methodological flaws and assess the feasibility and clarity of the research design (Malmqvist et al., 2021). In this study, one structured questionnaire will be pre-tested to ensure its reliability, relevance, and ease of administration. The pilot was conducted among a sample of five (5) dairy agribusiness SMEs selected from Kiambu County, which shares the same characteristics as the main study population. From each of these five firms, three staff members in strategic roles, such as marketing, finance, or quality assurance, were selected, yielding a pilot sample of 15 respondents. Insights from this pilot informed the refinement of the questionnaire and improved its applicability to the broader population of 40 dairy agribusiness SMEs.

### **3.7 Data Collection Procedure**

Data were collected using a structured, self-administered questionnaire administered to owners and managers of dairy agribusiness SMEs in Murang'a County. The researcher employed a mixed-mode approach to data collection, offering both physical and digital options based on respondent preference and accessibility. For physical administration, questionnaires were delivered in person using the drop-and-pick-later method. This approach allowed respondents adequate time to complete the questionnaire at their convenience, with follow-up visits scheduled within five to seven days for retrieval and clarification where necessary. For digital administration, the questionnaire was shared online via email. Participants opting for the digital method received a secure link along

with clear instructions for completion. The researcher tracked submissions and followed up with reminders to maximize response rates and completeness. Both data collection modes were accompanied by a brief introduction to the study and assurance of confidentiality to encourage participation and enhance the quality of responses.

### **3.8 Data Analysis**

Quantitative data were entered, cleaned, and organized using Microsoft Excel, then exported to the Statistical Package for the Social Sciences (SPSS) Version 26 for statistical analysis. The analysis was conducted at both descriptive and inferential levels to address the study objectives and test the hypothesized relationships between strategic management processes and organizational performance among dairy agribusiness SMEs in Murang'a County.

#### **3.8.1 Descriptive Analysis**

Descriptive statistics, including frequencies, percentages, means, standard deviations, and medians, were computed to summarize and describe the characteristics of the respondents and the study variables. This analysis provided an overview of the distribution and central tendency of data related to strategic planning, strategy implementation, strategy evaluation, strategic control, and performance indicators. The results were presented in tables and figures to facilitate interpretation and comparison across variables.

#### **3.8.2 Inferential Analysis**

Inferential statistics were used to examine relationships between independent and dependent variables and to test the study's hypotheses. The inferential analysis comprised bivariate regression models for individual relationships and an overall multiple

regression model to determine the combined influence of all predictors on firm performance.

To examine the individual effect of each dimension of strategic management processes on organizational performance, four simple regression models were estimated. Each independent variable was regressed separately against the dependent variable (P) to test the corresponding hypothesis. The general bivariate regression model was specified as:

$$P_i = \beta_1 + \beta_2 X_{3i} + \varepsilon_i$$

Where:

$P_i$  = Organizational performance of firm i

$X_{1i}$  = Individual strategic management process variable (j = 1, 2, 3, 4)

$B_1$  = Intercept (constant term)

$\beta_2$  = Regression coefficient for the independent variable

$\varepsilon_i$  = Random error term

The four specific bivariate models were expressed as:

- i. Model 1:  $P_i = \beta_0 + \beta_1 X_{1i} + \varepsilon_i$  – Strategic Planning
- ii. Model 2:  $P_i = \beta_0 + \beta_2 X_{2i} + \varepsilon_i$  — Strategy Implementation
- iii. Model 3:  $P_i = \beta_0 + \beta_3 X_{3i} + \varepsilon_i$  – Strategy Evaluation
- iv. Model 4:  $P_i = \beta_0 + \beta_4 X_{4i} + \varepsilon_i$  – Strategic Control

Each bivariate model tested the direct influence of a single strategic management process on organizational performance, assessing both direction and statistical significance. To determine the joint effect of all strategic management processes on organizational performance, a multiple linear regression model was estimated. The model evaluated the

combined predictive capacity of the four independent variables on firm performance and provided the foundation for testing the overall hypothesis. The model was specified as:

$$P_i = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \beta_3 X_{3i} + \beta_4 X_{4i} + \varepsilon_i$$

Where:

$P_i$  = Organizational performance of firm  $i$

$X_{1i}$  = Strategic Planning

$X_{2i}$  = Strategy Implementation

$X_{3i}$  = Strategy Evaluation

$X_{4i}$  = Strategic Control

$B_0$  = Regression constant

$B_1 - \beta_2$  = Coefficients of the independent variables

$\varepsilon_i$  = Random error term

The coefficients were estimated using the Ordinary Least Squares (OLS) method. Statistical significance of each parameter estimate was tested at the 95 percent confidence level ( $p \leq 0.05$ ). Diagnostic tests for normality, multicollinearity, heteroscedasticity, and autocorrelation (see Section 3.8) were applied to ensure the validity of model assumptions. This dual analytical framework bivariate and multivariate allowed the study to capture both individual and collective effects of strategic management processes on organizational performance, offering a comprehensive and empirically grounded understanding of how these strategic practices shape firm outcomes among dairy agribusiness SMEs in Murang'a County.

### **3.9 Diagnostic Tests**

To ensure the validity, reliability, and robustness of the regression model employed in this study, several diagnostic tests were conducted prior to inferential analysis. Diagnostic testing is essential in regression analysis as it verifies whether the fundamental assumptions of the classical linear regression model are satisfied, thereby guaranteeing that the model produces unbiased, consistent, and efficient estimates (Gujarati & Porter, 2009). The tests conducted in this study included the Normality Test, Multicollinearity Test, Heteroscedasticity Test, and Autocorrelation Test. Each test served a distinct function in confirming the appropriateness of the data for multiple regression analysis.

#### **3.9.1 Normality Test**

The assumption of normality requires that the residuals of the regression model are normally distributed. This assumption ensures the validity of inferential statistics such as t-tests and F-tests, which are based on the assumption of normality of errors (Field, 2018). In this study, the Shapiro–Wilk test was used to examine whether the residuals followed a normal distribution, given its superior performance for small and medium sample sizes (Ghasemi & Zahediasl, 2012). A *p*-value greater than 0.05 from the Shapiro–Wilk test indicates that the null hypothesis of normality cannot be rejected, suggesting that the residuals are normally distributed. This was complemented by graphical inspection using Normal Probability Plots (P–P plots) and histograms, which provide visual confirmation of whether the residuals align closely along the diagonal line representing a normal distribution. Achieving normality implies that the model parameters and hypothesis tests would be statistically valid and reliable.

### **3.9.2 Multicollinearity Test**

The multicollinearity test was conducted to determine whether high intercorrelations existed among the independent variables. Multicollinearity inflates the standard errors of regression coefficients, making it difficult to isolate the effect of each predictor on the dependent variable (Pallant, 2020). To detect multicollinearity, the Variance Inflation Factor (VIF) and Tolerance values were computed. According to Field (2018) and Gujarati and Porter (2009), a VIF value exceeding 10 or a Tolerance value below 0.1 signals the presence of serious multicollinearity. VIF quantifies how much the variance of a regression coefficient increases due to collinearity, while Tolerance (the reciprocal of VIF) measures the proportion of a variable's variance not explained by other predictors. When high multicollinearity is detected, appropriate remedies include removing redundant predictors, transforming variables, or combining related variables. Maintaining low VIF values ensures that each independent variable uniquely contributes to explaining the dependent variable, thereby enhancing the interpretability and precision of the regression coefficients.

### **3.9.3 Homoscedasticity Test**

The assumption of homoscedasticity requires that the variance of residuals remains constant across all predicted values of the dependent variable. Violation of this assumption, known as heteroscedasticity, can lead to inefficient coefficient estimates and biased significance levels (Wooldridge, 2015). To assess this, the Breusch–Pagan test was employed for its robustness in detecting unequal variance. In this test, a  $p$ -value greater than 0.05 indicates that the residuals exhibit constant variance, confirming the assumption of homoscedasticity. Conversely, a  $p$ -value below 0.05 indicates heteroscedasticity, suggesting that the residual variance is not uniform across observations. To address any detected heteroscedasticity, the study applied robust

standard errors, which adjust for non-constant variance without altering the underlying regression coefficients. Additionally, residual plots were examined to visually assess the presence or absence of heteroscedasticity. Ensuring homoscedasticity enhances the efficiency and reliability of the estimated model parameters.

#### **3.9.4 Autocorrelation Test**

The autocorrelation test was used to evaluate whether residuals in the regression model were correlated across observations. Autocorrelation violates the assumption of independence of errors and often occurs in time-series or cross-sectional data with ordered structures (Pallant, 2020). To detect autocorrelation, the Durbin–Watson (DW) statistic was employed. The Durbin–Watson statistic ranges from 0 to 4, with values close to 2 indicating the absence of autocorrelation, values below 2 suggesting positive autocorrelation, and values above 2 suggesting negative autocorrelation (Field, 2018). The test ensures that the residuals from the regression model are independent, thus validating the model’s reliability. If autocorrelation is detected, remedial measures such as model specification or the inclusion of additional control variables can be applied. Establishing the independence of residuals ensures that the regression coefficients are unbiased and that the statistical inferences drawn from the model are valid.

Conducting these diagnostic tests was crucial to confirm that the dataset satisfied the assumptions of multiple regression analysis. The successful validation of these assumptions enhanced the credibility, internal validity, and statistical soundness of the model applied in this study. The detailed results and interpretation of these diagnostic tests are presented in Chapter Four.

### **3.10 Ethical Consideration**

In conducting this study on the effect of strategic management processes on the performance of Dairy Agribusiness SMEs in Murang'a County, Kenya, the researcher upheld the highest ethical standards to protect the dignity, rights, and safety of all participants. Prior to data collection, the research proposal was submitted to the Kabarak University Research Ethics Committee for review and approval, ensuring compliance with institutional guidelines. Additionally, the researcher obtained a research permit from the National Commission for Science, Technology, and Innovation, as required by national policy for studies involving human subjects.

Participation in the study was entirely voluntary. All respondents, including owners and managers of dairy agribusiness SMEs, will be required to provide informed consent prior to their involvement. Each participant received a consent form that clearly outlined the study's purpose, the procedures involved, the expected time commitment, any foreseeable risks or benefits, and their rights as participants. These rights include the ability to decline to answer specific questions or to withdraw from the study at any time without negative consequences. To accommodate the linguistic diversity of participants in Murang'a County, the consent form was available in both English and Kiswahili.

To protect participant privacy and ensure responsible data management, the researcher implemented data handling protocols. Hardcopy responses will be kept in a locked cabinet under the custody of the principal investigator. Digital files will be encrypted and stored on a password-protected device. Each participating firm and its representatives were assigned a unique code to anonymize their identity, ensuring that no names or business identifiers appear in the analysis or reporting of findings. Only the research team had access to the raw data, and the data was used strictly for academic purposes in line with data protection regulations.

In terms of risk mitigation, the study involved minimal risk to participants. The questionnaire was designed to focus on strategic management practices rather than personal or sensitive financial matters. Pilot testing helped to refine any items that may be unclear or inadvertently cause discomfort. In the unlikely event that a participant feels distressed or unwilling to proceed, the researcher respects their decision to decline or discontinue participation without question.

Throughout the research lifecycle, the study adhered to ethical principles including respect for persons, beneficence, and justice. Data was presented in aggregate form in all publications and reports to avoid identifying individual firms or respondents. The researcher also ensured transparency, accountability, and ongoing compliance with all applicable ethical and legal frameworks governing academic research conducted in Kenya.

## CHAPTER FOUR

### DATA ANALYSIS, PRESENTATION, AND INTERPRETATION

#### 4.1 Introduction

Strategic management processes are central to how dairy agribusiness SMEs in Murang'a County position themselves for sustained growth and competitiveness. In this study, managers and key staff provided information on strategic planning, implementation, evaluation, and control, as well as on the performance of their enterprises. The data obtained form the basis for examining patterns in these processes and the extent to which they are associated with firm performance. The following sections begin by outlining the survey response rate and the characteristics of the participating enterprises before presenting the descriptive and inferential analyses of each strategic management dimension.

#### 4.2 Response Rate

**Table 4**

*Study's Response Rate*

Sampled No. of Respondents	No. of Questionnaires Returned	Response Rate (%)
160	143	89.4%

Out of a targeted population of 160 respondents, 143 completed and returned the questionnaire, 89.4%. This is well above the 70 % benchmark commonly cited in survey research as acceptable for generalizable findings. The high response rate strengthens the validity and reliability of the study results and reflects successful engagement with dairy agribusiness SMEs in Murang'a County

#### 4.3 Firm Characteristics

The profile of the sampled dairy agribusiness SMEs shows the structural and operational contexts within which strategic management practices are applied. Legal form,

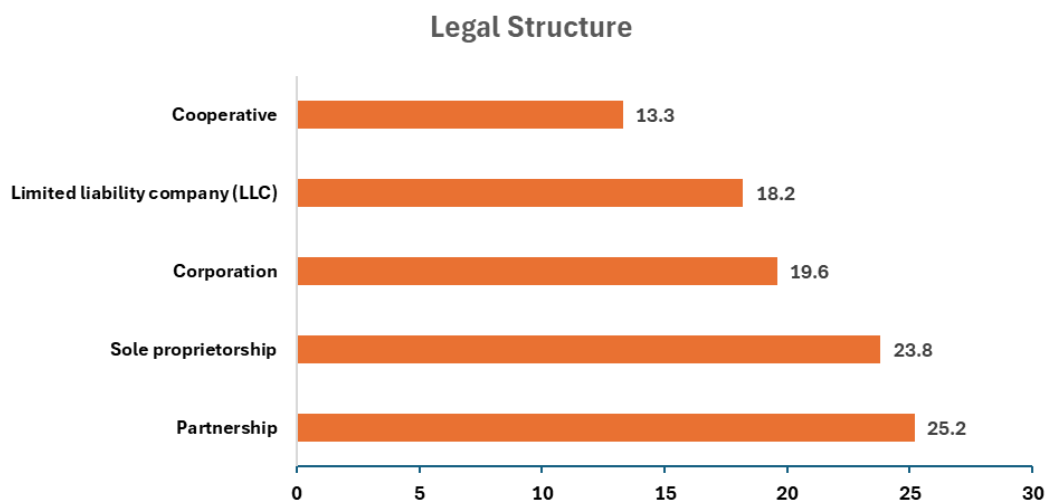
ownership type, workforce size, market orientation, marketing channels, years in operation, annual turnover, and farmer coverage provide important background for interpreting how these enterprises plan, implement, evaluate, and control their strategies.

### 4.3.1 Legal Structure

Understanding the legal structure of dairy agribusiness SMEs is essential for interpreting their governance, ownership patterns, and strategic management processes. Different legal frameworks influence how decisions are made, how resources are mobilized, and the level of regulatory compliance required. The study categorized the participating enterprises into five main legal structures: partnerships, sole proprietorships, corporations, limited liability companies (LLCs), and cooperatives. The distribution is illustrated in Figure 3.

**Figure 3**

*Legal Structure of Dairy Agribusiness SMEs in Murang'a County*



The dominance of sole proprietorships and partnerships suggests that many dairy SMEs prefer ownership forms that offer low entry barriers and operational agility. Such structures typically rely on owner-driven decision-making, which can support quick adjustments but often limits formal governance and structured strategic planning. The comparatively low number of cooperatives and limited liability companies indicates that

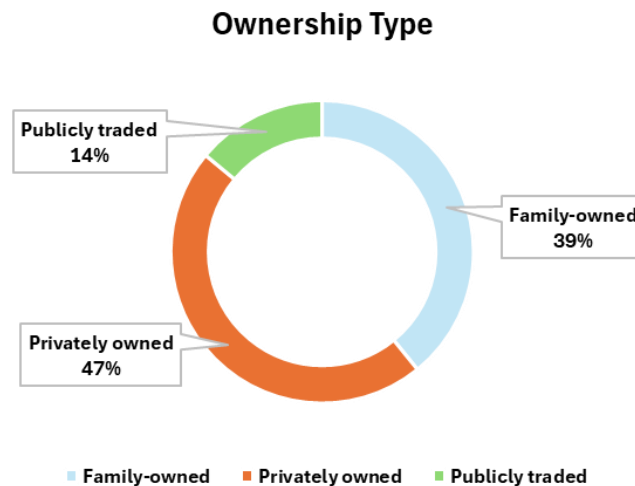
only a minority of enterprises operate under governance models with formal accountability, shared ownership, and the managerial capacity needed for more advanced planning, evaluation, and control mechanisms.

#### 4.3.2 Ownership Type

Ownership structure plays a significant role in determining how dairy agribusiness SMEs are governed and managed. The study sought to establish the ownership type of the participating firms, and the findings are presented in Figure 4.

**Figure 4**

*Ownership Type of Dairy Agribusiness SMEs in Murang'a County*



The prevalence of private and family-owned firms underscores an entrepreneurial, family-driven dairy sector in Murang'a County. These ownership forms often prioritise stability, quick decision-making, and operational continuity, but may not always invest in formal strategic planning or performance evaluation systems. Publicly traded firms, which typically operate under more formal governance and accountability structures, remain relatively few, suggesting that corporate-level strategic management practices are not yet widespread in the sector. This ownership landscape influences how strategies are

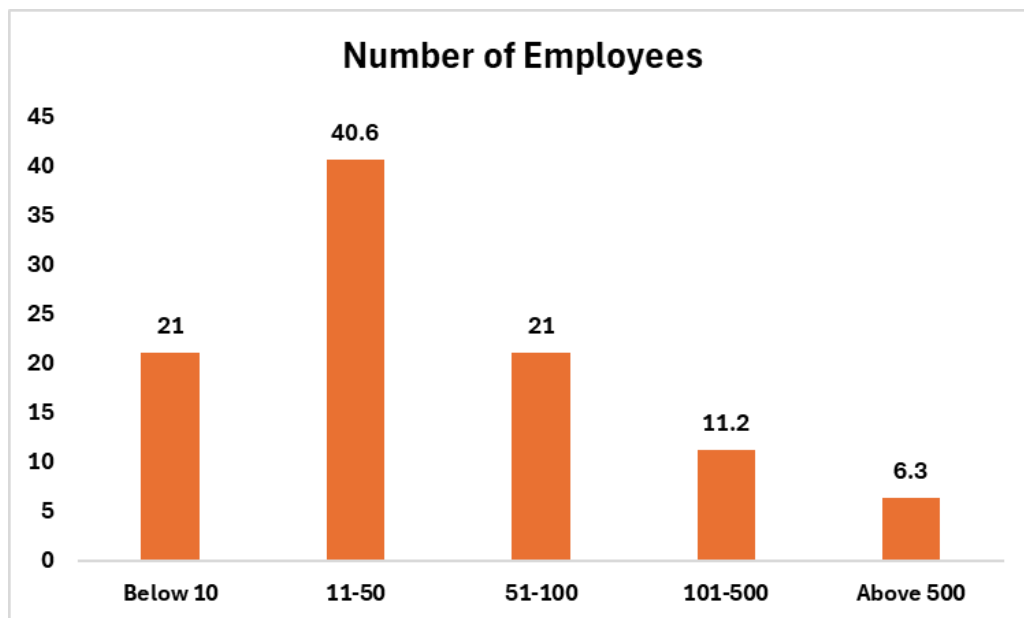
developed and executed, with many firms relying on informal or experience-based approaches.

### 4.3.3 Number of Employees

Firm size, measured by the number of employees, provides insight into the operational capacity and level of formalization within dairy agribusiness SMEs. The study categorized participating firms into five employee-size brackets, and the results are illustrated in Figure 5.

**Figure 5**

*Number of Employees in Dairy Agribusiness SMEs in Murang'a County*



This distribution shows that most dairy agribusiness SMEs fall within the small-to-medium size category. Firms with fewer than 10 employees are likely to be owner-managed with limited managerial specialization, which may reduce their ability to implement structured strategic processes. Medium-sized firms (11–100 employees) often exhibit emerging management hierarchies that can support more consistent planning and control. The presence of a few larger firms suggests some scale diversity in the sector,

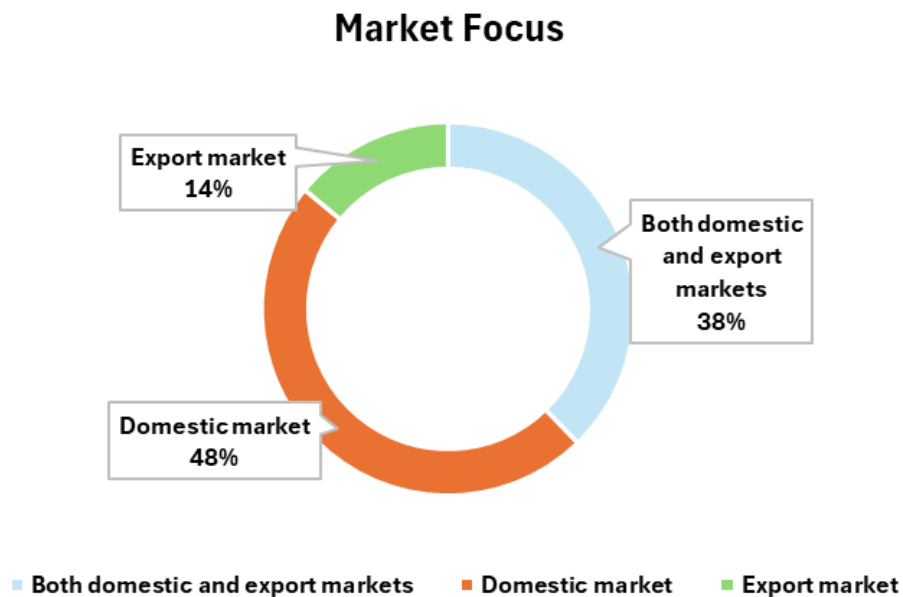
with these enterprises likely to have more formalized organisational systems and clearer strategic routines.

#### 4.3.4 Market Focus

Market orientation determines the geographical scope and competitiveness of dairy agribusiness SMEs. It indicates whether firms primarily serve local consumers, participate in export markets, or operate in both. Understanding this dimension is essential for interpreting strategic focus, production capacity, and the level of integration into national and international value chains. The study findings are presented in Figure 6.

**Figure 6**

*Number of Employees in Dairy Agribusiness SMEs in Murang'a County*



The strong domestic-market orientation suggests that many SMEs primarily target local consumers and processors, which may lead them to focus on short-term operational strategies rather than long-term competitive positioning. Firms serving export markets must comply with stricter quality and documentation requirements, which often necessitate more structured planning, evaluation, and control systems. The mixed-market

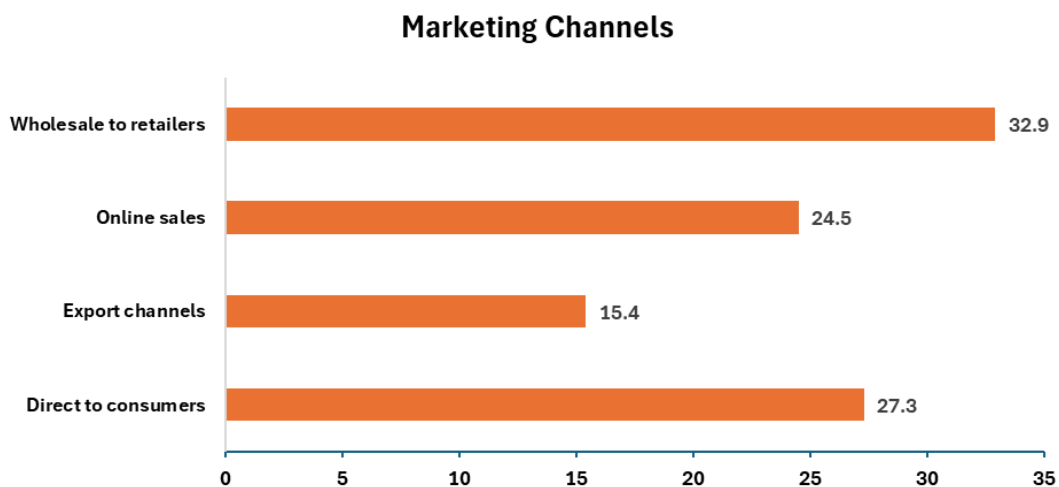
firms (domestic and export) reflect enterprises operating in more complex environments requiring diversified strategies and greater managerial coordination.

#### 4.3.5 Marketing Channels

Marketing channels determine how dairy products reach consumers and markets, influencing revenue stability, brand visibility, and customer retention. Efficient distribution systems are vital for ensuring consistent market access and competitive advantage, particularly in the dairy value chain, where perishability and logistics play major roles. The study examined the primary marketing channels used by the participating firms, as presented in Figure 7.

**Figure 7**

*Marketing Channels for Dairy Agribusiness SMEs in Murang'a County*



As shown in Figure 7, the most common marketing channel was wholesale to retailers, adopted by 32.9% of firms, followed by direct-to-consumer sales at 27.3% and online sales at 24.5%. The reliance on wholesale distribution suggests that many SMEs depend on intermediaries, which may simplify logistics but limit control over branding and final customer experience. The growing use of direct-to-consumer and online channels reflects shifting marketing approaches driven by customer convenience, digital adoption, and efforts to increase profit margins. Firms relying on export channels operate within more

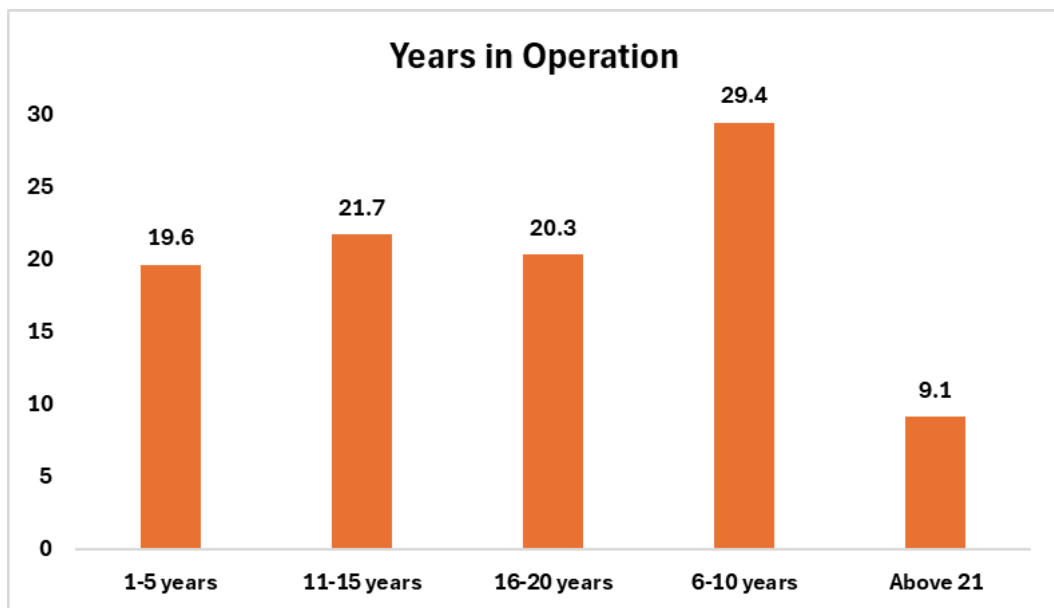
demanding regulatory environments, requiring stronger internal control systems and consistent quality assurance processes.

#### 4.3.6 Years in Operation

The number of years a firm has been in operation reflects its level of experience, market adaptation, and long-term sustainability. Older firms often benefit from accumulated managerial expertise, established customer networks, and stronger financial stability, whereas younger firms may be more flexible and innovative but face greater risks of operational volatility. The study sought to determine the duration of operation among the sampled dairy agribusiness SMEs, as illustrated in Figure 8.

**Figure 8**

*Years of Operations of Dairy Agribusiness SMEs in Murang'a County*



As shown in Figure 8, the largest proportion of firms (29.4%) had been in operation for 6–10 years, followed by those in the 11–15-year range (21.7%) and the 16–20-year range (20.3%). This distribution suggests that many dairy SMEs have survived beyond their initial establishment phase and are in a period of consolidation and growth. Firms with 6–15 years of experience may have developed organizational routines but may not yet

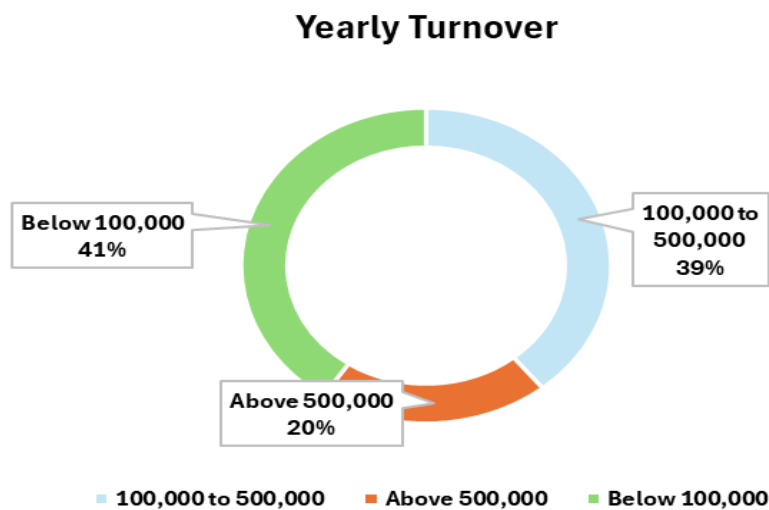
have fully formalized strategic processes. Younger firms may be flexible and innovative, but face challenges in institutionalizing planning or evaluation systems. The limited number of older firms suggests that long-term sustainability remains a challenge in the sector, potentially due to competition, financial constraints, or regulatory changes.

#### 4.3.7 Yearly Turnover

Annual turnover represents the total revenue generated by a firm within a year and serves as an indicator of business performance, market strength, and financial sustainability. In this study, respondents were asked to indicate their firm's average yearly turnover, and the results are presented in Figure 9.

**Figure 9**

*Yearly Turnover of Dairy Agribusiness SMEs in Murang'a County*



As shown in Figure 9 40.6% of the sampled dairy agribusiness SMEs reported an annual turnover of below KSh 100,000, while 39.2% earned between KSh 100,000 and KSh 500,000, and 20.3% generated above KSh 500,000 per year. The concentration of firms with low turnover indicates limited financial capacity, which may restrict investment in strategic planning tools, staff development, and performance monitoring systems. Firms generating above KSh 500,000 likely have greater financial stability and operational

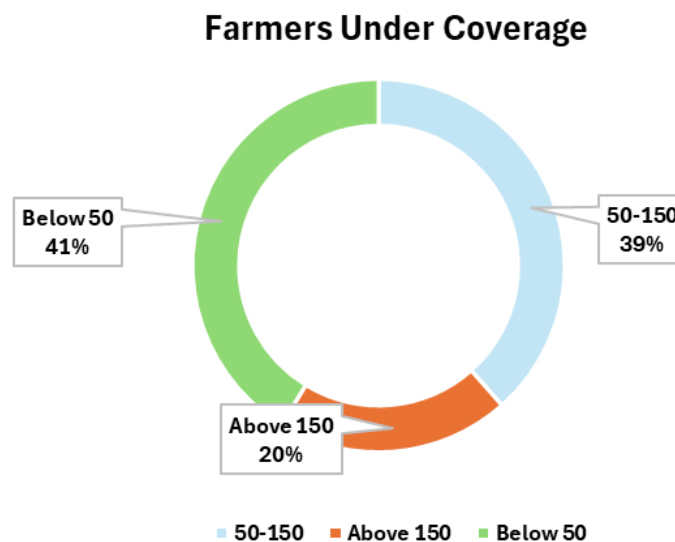
efficiency, enabling them to implement more structured strategic management practices. Turnover thus serves as an indicator of strategic capability and organisational maturity.

#### 4.3.8 Farmers Under Coverage

The number of farmers under a firm's coverage reflects the extent of its operational outreach and integration within the local dairy value chain. The study therefore, sought to determine the number of farmers supported or served by each participating dairy agribusiness SME. The results are presented in Figure 10.

**Figure 10**

*Farmers Under Coverage for Dairy Agribusiness SMEs in Murang'a County*



As shown in Figure 10, 41.3% of firms reported working with fewer than 50 farmers, 38.5% with 50–150 farmers, and 20.3% with over 150 farmers. Firms working with fewer than 50 farmers likely operate within small, localized supply networks with manageable volumes but limited scaling potential. Those sourcing from 50–150 farmers demonstrate growing operational complexity, requiring more structured coordination and monitoring. Firms managing over 150 farmers need strong systems for planning, quality

control, and performance tracking, reflecting more mature strategic management processes.

#### **4.4 Descriptive Statistics for the Study Variables**

Understanding how dairy agribusiness SMEs in Murang'a County perceive and practice strategic management requires first examining the overall patterns in the data. Descriptive statistics provide a clear picture of how respondents rated each dimension of strategic planning, implementation, evaluation, and control, as well as the performance of their enterprises. By examining the average scores and the extent of variation across responses, it becomes possible to see which aspects of strategic management are most and least emphasised among the sampled firms.

##### **4.4.1 Strategic Planning**

These findings summarize respondents' views on strategic planning practices within dairy agribusiness SMEs. Ten statements measured the extent to which firms define goals, analyze markets, allocate resources, manage risk, innovate, plan for the long term, invest in their workforce, collaborate with partners, and monitor planning efforts. Responses were rated on a 5-point Likert scale, ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). Table 5 presents the item-by-item distribution of responses, together with the mean and standard deviation for each statement.

**Table 5***Descriptive Statistics for Strategic Planning Items among Dairy Agribusiness SMEs*

Statement	SA 5	A 4	N 3	D 2	SD 1	Mean	Std
The clearly defined strategic goals of the firm contribute to its performance	1.4% (2)	25.2% (36)	50.3% (72)	21.0% (30)	2.1% (3)	3.03	0.778
The firm conducts thorough market analysis to identify growth opportunities and improve performance	1.4% (2)	25.9% (37)	51.0% (73)	21.0% (30)	0.7% (1)	3.06	0.743
The firm effectively utilizes its competitive advantage to enhance performance.	2.1% (3)	23.8% (34)	51.0% (73)	21.0% (30)	2.1% (3)	3.03	0.787
The firm strategically allocates resources to maximize performance.	1.4% (2)	25.2% (36)	44.1% (63)	28.7% (41)	0.7% (1)	2.98	0.791
A well-developed risk management strategy in place in the firm has impacted performance	2.8% (4)	21.7% (31)	51.7% (74)	22.4% (32)	1.4% (2)	3.02	0.782
The firm embraces innovation and actively adopts new technologies to enhance performance.	1.4% (2)	23.1% (33)	51.0% (73)	24.5% (35)	0.0% (0)	3.01	0.731
The firm engages in long-term planning that contributes to sustained performance.	1.4% (2)	26.6% (38)	49.7% (71)	21.0% (30)	1.4% (2)	3.06	0.767
The firm invests in developing its workforce, which impacts performance.	2.1% (3)	24.5% (35)	49.7% (71)	22.4% (32)	1.4% (2)	3.03	0.782
The firm strategically collaborates with partners to improve performance.	1.4% (2)	25.9% (37)	50.3% (72)	19.6% (28)	2.8% (4)	3.03	0.791
The firm actively monitors and evaluates its strategic planning efforts to ensure improved performance	2.8% (4)	23.1% (33)	49.0% (70)	25.2% (36)	0.0% (0)	3.03	0.773

The descriptive statistics reveal that across all ten items, most respondents selected the neutral category (around 49–51 per cent per item), with roughly one quarter agreeing and very small proportions strongly agreeing or strongly disagreeing. For example, 25.2% (n

= 36) agreed, and 1.4% (n = 2) strongly agreed that clearly defined strategic goals contribute to performance, while 50.3% (n = 72) were neutral and 21.0% (n = 30) disagreed. Similar patterns were observed for market analysis and resource allocation. Mean scores for all items ranged between 2.98 and 3.06 with standard deviations between 0.73 and 0.79, indicating relatively moderate ratings and little dispersion. These results suggest that although strategic planning practices are present in many firms, respondents' assessments tend to be cautious, clustering around the neutral point rather than expressing strong agreement or disagreement.

Descriptive statistics for strategy implementation show that most firms report engaging in activities consistent with operationalizing plans, such as assigning responsibilities and coordinating routine activities. Firms with clearer organizational structures or larger workforces are likely to exhibit stronger implementation practices. However, differences in item standard deviations suggest that not all SMEs follow consistent procedures for translating plans into action. Some may rely on ad hoc decision-making rather than structured implementation systems, with implications for performance outcomes.

#### **4.4.2 Strategic Implementation**

Respondents were also asked to rate how their firms translate plans into action. The items under strategic implementation captured practices such as allocating resources, scanning the market for threats and opportunities, maintaining effective communication, engaging staff in implementation, setting performance metrics, championing initiatives at the leadership level, adapting plans to changing conditions, and fostering interdepartmental collaboration. Each item was rated on a five-point Likert scale from 1 (Strongly Disagree) to 5 (Strongly Agree). Table 6 provides the detailed distribution of responses for each statement together with the mean and standard deviation.

**Table 6***Descriptive Statistics for Strategic Implementation Items among Dairy Agribusiness SMEs*

Statement	SA 5	A 4	N 3	D 2	SD 1	Mean	Std
The firm allocates its resources (financial, human, and technological	1.4% (2)	25.2% (36)	50.3% (72)	21.0% (30)	2.1% (3)	3.03	0.77 8
The firm conducts thorough market analysis to identify opportunities and threats that can impact its performance	1.4% (2)	25.9% (37)	51.0% (73)	21.0% (30)	0.7% (1)	3.06	0.74 3
The communication channels within the firm support the effective implementation of strategic decisions	2.1% (3)	23.8% (34)	51.0% (73)	21.0% (30)	2.1% (3)	3.03	0.78 7
Employees in the firm are actively engaged in the strategy development and implementation process	1.4% (2)	25.2% (36)	44.1% (63)	28.7% (41)	0.7% (1)	2.98	0.79 1
The firm has a well-defined performance metrics in place to assess the progress and effectiveness of strategy implementation	2.8% (4)	21.7% (31)	51.7% (74)	22.4% (32)	1.4% (2)	3.02	0.78 2
The leadership of the firm actively supports and champions the implementation of strategic initiatives.	1.4% (2)	23.1% (33)	51.0% (73)	24.5% (35)	0.0% (0)	3.01	0.73 1
The leadership of the firm actively supports and champions the implementation of strategic initiatives	1.4% (2)	26.6% (38)	49.7% (71)	21.0% (30)	1.4% (2)	3.06	0.76 7
The firm regularly reviews and adapts its strategic plans in response to changing market conditions, and stakeholder feedback to ensure continued relevance and effectiveness.	2.1% (3)	24.5% (35)	49.7% (71)	22.4% (32)	1.4% (2)	3.03	0.78 2
Collaboration and coordination among different teams and departments in the firm influence its strategy implementation	1.4% (2)	25.9% (37)	50.3% (72)	19.6% (28)	2.8% (4)	3.03	0.79 1
The firm emphasizes continuous improvement in the strategy implementation process.	2.8% (4)	23.1% (33)	49.0% (70)	25.2% (36)	0.0% (0)	3.03	0.77 3

Across all ten statements, the largest proportion of respondents selected the neutral option (49–51%), while roughly one quarter indicated agreement, and only a small minority expressed strong agreement or strong disagreement. For instance, 25.2% (n = 36) agreed, and 1.4% (n = 2) strongly agreed that their firms allocate financial, human, and technological resources strategically, while 50.3% (n = 72) were neutral and 21.0% (n = 30) disagreed. Comparable distributions were found for market analysis, communication, leadership support, and continuous improvement. Mean scores ranged narrowly from 2.98 to 3.06, with standard deviations of about 0.73–0.79, indicating moderate ratings and limited dispersion. These results indicate that while elements of strategic implementation are present in many dairy agribusiness SMEs, these practices are not yet strongly entrenched, leading to generally cautious assessments from respondents.

Descriptive statistics for strategy implementation show that most firms report engaging in activities consistent with operationalizing plans, such as assigning responsibilities and coordinating routine activities. Firms with clearer organizational structures or larger workforces are likely to exhibit stronger implementation practices. However, differences in item standard deviations suggest that not all SMEs follow consistent procedures for translating plans into action. Some may rely on ad hoc decision-making rather than structured implementation systems, which may have implications for performance outcomes.

#### **4.4.3 Strategic Evaluation**

Respondents also rated how their organizations review and refine their strategies. The items covered benchmarking against best practices, frequency and alignment of evaluations, clarity of evaluation criteria, stakeholder involvement, openness to adaptation, and accountability for implementing recommendations. Ratings were

captured on a five-point Likert scale from 1 (Strongly Disagree) to 5 (Strongly Agree).

The table below highlights the distribution of responses for each statement together with the mean and standard deviation.

**Table 7**

*Descriptive Statistics for Strategic Evaluation Items among Dairy Agribusiness SMEs*

Statement	SA 5	A 4	N 3	D 2	SD 1	Mean	Std
The firm benchmarks the performance of its strategies against best practices and industry standards	4.2% (6)	25.9% (37)	46.9% (67)	21.7% (31)	1.4% (2)	3.1	0.833
The firm regularly evaluates its strategies to ensure they are aligned with its goals and objectives.	3.5% (5)	24.5% (35)	49.0% (70)	20.3% (29)	2.8% (4)	3.06	0.837
The communication channels within the firm support the effective implementation of strategic decisions	3.5% (5)	25.9% (37)	50.3% (72)	18.9% (27)	1.4% (2)	3.11	0.797
The firm has clearly defined criteria for evaluating the effectiveness of its strategies	2.8% (4)	29.4% (42)	46.2% (66)	19.6% (28)	2.1% (3)	3.11	0.823
The firm derives actionable insights from its strategy evaluation processes and uses it to make informed decisions	3.5% (5)	25.2% (36)	47.6% (68)	23.8% (34)	0.0% (0)	3.08	0.792
The firm uses the findings of strategy evaluation to learn and improve its future strategies	2.8% (4)	27.3% (39)	44.8% (64)	23.8% (34)	1.4% (2)	3.06	0.824
The firm involves key stakeholders in the strategy evaluation process to gather diverse perspectives.	1.4% (2)	25.9% (37)	52.4% (75)	20.3% (29)	0.0% (0)	3.08	0.717
The firm is open to adapting its strategies based on the outcomes of the evaluation process.	5.6% (8)	26.6% (38)	49.0% (70)	16.8% (24)	2.1% (3)	3.17	0.847
The firm holds individuals and teams accountable for implementing actions derived from strategy evaluation.	2.8% (4)	26.6% (38)	53.1% (76)	16.1% (23)	1.4% (2)	3.13	0.762
The firm conducts strategy evaluation on an ongoing basis to ensure its strategies remain effective.	2.1% (3)	30.1% (43)	46.2% (66)	20.3% (29)	1.4% (2)	3.11	0.797

Responses to the strategic evaluation items reveal a slightly more favorable orientation compared to those on planning or implementation. Although neutrality still characterizes the largest share of answers (approximately 45–53% per item), agreement is marginally stronger on aspects such as adaptability and accountability. For instance, 5.6% (n = 8) strongly agreed and 26.6% (n = 38) agreed that their firms adjust strategies in light of evaluation findings, while only 16.8% (n = 24) expressed disagreement. Items on benchmarking and the clarity of criteria also drew more than one-quarter of respondents into agreement, with fewer than 3% strongly disagreeing. Mean scores ranging from 3.06 to 3.17, with standard deviations of 0.72 to 0.85, indicate moderate endorsement and slightly greater variability than in the planning and implementation sections. Taken together, these results suggest that most dairy agribusiness SMEs possess evaluation mechanisms and are beginning to apply evaluation results more actively for learning and adaptation, signalling a gradual maturation of practice in this area.

In the strategy evaluation, the descriptive results show that respondents generally acknowledge the need to assess performance, track progress, and identify areas for improvement. However, variability in responses indicates that formal monitoring and evaluation mechanisms differ significantly across SMEs. Firms lacking financial or managerial capacity may evaluate performance less systematically, relying instead on periodic reviews or informal assessments. This inconsistency reflects the uneven adoption of evaluation practices in the dairy sector, where some firms have begun to integrate more formal evaluation routines while others remain at early stages.

#### **4.4.4 Strategic Control**

Strategic control reflects how effectively a firm's internal systems, leadership, and processes support the implementation and monitoring of its strategic initiatives. This section presents descriptive statistics for 10 items measuring the quality of strategic

control among dairy agribusiness SMEs, covering task division, reporting relationships, control systems, leadership commitment, and technology use. The table summarises the frequency distributions, means, and standard deviations for each item.

**Table 8**

*Descriptive Statistics for Strategic Control Items among Dairy Agribusiness SMEs*

Statement	SA 5	A 4	N 3	D 2	SD 1	Mean	Std
The division of tasks and responsibilities in the firm is well-defined and supports the effective implementation of our strategic initiatives.	2.1% (3)	23.1% (33)	53.1% (76)	21.0% (30)	0.7% (1)	3.05	0.744
The firm's reporting relationships facilitate coordination and communication among different departments or teams to achieve strategic goals.	2.8% (4)	18.9% (27)	55.2% (79)	21.0% (30)	2.1% (3)	2.99	0.774
The strategy control process of the firm fosters trust and collaboration among different stakeholders and partners.	2.1% (3)	25.2% (36)	44.8% (64)	26.6% (38)	1.4% (2)	3.00	0.814
The firm's information and operational control systems provide timely and accurate feedback on our performance.	1.4% (2)	18.9% (27)	58.7% (84)	20.3% (29)	0.7% (1)	3.00	0.692
Decision-making processes in the firm are aligned with our strategic objectives and ensure efficient resource allocation.	2.1% (3)	25.2% (36)	56.6% (81)	15.4% (22)	0.7% (1)	3.13	0.711
The firm's leadership team consistently demonstrates a commitment to the organization's strategic goals and fosters a sense of accountability among employees.	1.4% (2)	17.5% (25)	58.7% (84)	21.0% (30)	1.4% (2)	2.97	0.706
The firm's information and control systems in our organization facilitate effective communication and coordination across different departments or teams.	1.4% (2)	22.4% (32)	49.7% (71)	25.2% (36)	1.4% (2)	2.97	0.769
The firm utilizes operational control systems to monitor and regulate strategic activities.	0.7% (1)	21.0% (30)	59.4% (85)	18.2% (26)	0.7% (1)	3.03	0.671
The firm's information systems in our organization provide timely and accurate data that is critical for strategic decision-making	2.1% (3)	23.1% (33)	52.4% (75)	21.7% (31)	0.7% (1)	3.04	0.749
The firm utilizes technology tools and systems that automate key tasks and improve operational efficiency	1.4% (2)	19.6% (28)	52.4% (75)	25.9% (37)	0.7% (1)	2.95	0.735

Analysis of the strategic control items revealed that neutral responses dominated across all ten statements, ranging from approximately 45% to 59% of respondents per item (53.1% [n = 76] neutral on task division, 55.2% [n = 79] neutral on reporting relationships, and 58.7% [n = 84] neutral on performance feedback). Mean scores ranged from 2.95 to 3.13, with standard deviations of 0.67 to 0.81, indicating moderate endorsement and relatively low variability. Items addressing task division and decision-making alignment achieved the highest mean values (3.05–3.13), with about one quarter agreeing (e.g., 25.2% [n = 36] agreed that decision-making processes are aligned with strategic objectives), suggesting these mechanisms are more consistently established among dairy agribusiness SMEs. In contrast, statements concerning reporting relationships, leadership commitment, cross-departmental communication, and the use of technology and operational control systems scored slightly lower (means near 2.95–3.00), with agreement levels between roughly 17% and 23% (19.6% [n = 28] agreed on technology tools), reflecting that while such structures exist, their perceived effectiveness remains limited.

The descriptive findings for strategic control reveal similar patterns. While many enterprises agreed with statements relating to oversight, compliance, and corrective action, the spread of responses suggests that control mechanisms are not uniformly implemented. Firms with more complex operations, larger supply networks, or higher quality requirements are more likely to invest in formal control systems. Smaller or younger firms may adopt basic oversight practices but lack structured documentation or audit-based mechanisms. These patterns align with the understanding that control processes often develop as firms grow in size, complexity, and resource availability.

#### 4.5 Correlation Analysis

Correlation analysis was conducted to examine the strength and direction of linear relationships among the study constructs. Given that normality assumptions were satisfied, Pearson's product-moment correlation coefficients ( $r$ ) were computed for Strategic Planning, Strategy Implementation, Strategy Evaluation, Strategic Control, and Performance. Statistical significance was assessed at  $\alpha = 0.05$ . Correlations were interpreted using conventional thresholds (approximately 0.10 = small, 0.30 = moderate, 0.50+ = large).

**Table 9**

*Pearson Correlation Matrix ( $r$ ) for Strategic and Performance Variables*

Variable	Strategic Planning	Strategy Implementation	Strategy Evaluation	Strategic Control	Performance
Strategic Planning	1.000***	-0.023	-0.043	-0.037	0.217**
Strategy Implementation	-0.023	1.000***	0.065	0.066	0.194*
Strategy Evaluation	-0.043	0.065	1.000***	0.117	0.183*
Strategic Control	-0.037	0.066	0.117	1.000***	0.215*
Performance	0.217**	0.194*	0.183*	0.215*	1.000***

Note: Entries are Pearson  $r$  with significance stars (\*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$ ).

The correlation matrix indicates that all four strategic management processes exhibit small but positive statistically significant relationships with performance. Strategic Planning was positively associated with performance,  $r = .217$ ,  $p < .01$ , suggesting that firms engaging in more structured planning tend to report slightly better performance outcomes. Strategy Implementation also showed a positive association with performance,

$r = .194$ ,  $p < .05$ , indicating that clearer execution mechanisms correspond with marginal improvements in enterprise performance.

Similarly, Strategy Evaluation was positively related to performance,  $r = .183$ ,  $p < .05$ , implying that SMEs that monitor and review their activities report somewhat stronger performance indicators. Strategic Control demonstrated a comparable relationship,  $r = .215$ ,  $p < .05$ , showing that firms with more consistent oversight and corrective mechanisms tend to perform slightly better. Although all effect sizes fall within the small range, the consistency of the direction and statistical significance suggests that the four strategic management dimensions collectively contribute to performance, even if their individual explanatory power is modest.

Intercorrelations among the independent variables were weak and predominantly non-significant, with coefficients ranging from  $-.043$  to  $.117$ . These low associations indicate that the four strategic management constructs represent distinct managerial domains rather than overlapping behaviours. This pattern is consistent with the earlier multicollinearity diagnostics, confirming that the variables do not substantially inflate one another in multivariate analysis.

Overall, the correlation results support the study's theoretical premise that improvements in strategic planning, implementation, evaluation, and control are associated with better performance among dairy agribusiness SMEs in Murang'a County. Although the relationships are relatively small, their statistical significance suggests that each process contributes incrementally to performance, reinforcing the importance of strengthening strategic management capabilities within the sector.

## 4.6 Diagnostic Test

Before proceeding with inferential analyses, it was essential to verify that the data met the assumptions underlying the selected statistical technique, regression analysis. Diagnostic tests are used to assess these assumptions and to ensure that the conclusions drawn from the analysis are valid and reliable. In this study, diagnostic checks focused primarily on normality, homoscedasticity, and multicollinearity assumptions.

### 4.6.1 Normality Assumptions Test

Normality was examined using the Shapiro–Wilk test on the variables. The null hypothesis of the Shapiro–Wilk test is that the data are typically distributed. A p-value greater than 0.05 indicates that the assumption of normality cannot be rejected.

**Table 10**

*Shapiro–Wilk Test of Normality*

Variable	Shapiro–Wilk W	p- Value	Interpretation
Strategic Planning	0.9843	0.1017	Approximately normal (assumption met)
Strategy Implementation	0.9942	0.8369	Approximately normal (assumption met)
Strategy Evaluation	0.9858	0.1476	Approximately regular (assumption met)
Strategic Control	0.9912	0.5144	Approximately normal (assumption met)
Performance	0.985	0.2473	Approximately normal (assumption met)

Normality of the composite variables was assessed using the Shapiro–Wilk test. As shown in Table 7 all variables including Strategic Planning ( $W = 0.9843$ ,  $p = 0.1017$ ), Strategy Implementation ( $W = 0.9942$ ,  $p = 0.8369$ ), Strategy Evaluation ( $W = 0.9858$ ,  $p$

= 0.1476), Strategic Control (W = 0.9912, p = 0.5144), and Performance (W = 0.9850, p = 0.2473), recorded p-values greater than 0.05. This means the null hypothesis of normality could not be rejected for any of the study variables. The W-statistics are all close to 1.0, and the high p-values indicate that the distributions of these variables are approximately normal. These results confirm that the normality assumption required for parametric statistical tests is satisfied for all key variables in the study, allowing subsequent analyses, such as correlations and regressions, to be performed without data transformations.

#### 4.6.2 Multicollinearity Test

A multicollinearity assessment was undertaken to determine whether the independent variables strategic planning, strategy implementation, strategy evaluation, and strategic control were excessively correlated. High intercorrelations among predictors can inflate the variance of regression coefficients and distort significance tests. Variance Inflation Factor (VIF) and Tolerance values were computed for each variable; VIF values below 5 (and Tolerance above 0.2) are generally considered acceptable, indicating no serious multicollinearity.

**Table 11**

*Multicollinearity Diagnostics (VIF and Tolerance)*

Variable	VIF	Tolerance
Strategic Planning	1.003	0.997
Strategy Implementation	1.008	0.992
Strategy Evaluation	1.019	0.982
Strategic Control	1.018	0.982

All independent variables recorded VIF values very close to 1 (ranging from 1.003 to 1.019) and Tolerance values near 1 (0.982–0.997). These results clearly indicate the

absence of multicollinearity among the predictors. As such, each strategic management dimension contributes unique information to the regression model without overlapping excessively with the others, ensuring stable coefficient estimates and reliable significance testing in subsequent analyses.

#### 4.6.3 Autocorrelation Assumption Test

Autocorrelation refers to the correlation of residuals across observations. In cross-sectional data, residuals are ideally independent. When autocorrelation is present, standard errors can be biased, and test statistics can be unreliable. This study examined the independence of residuals from the regression of Performance on the strategic constructs using the Durbin–Watson (DW) test. A DW statistic close to 2.0 indicates no autocorrelation; values substantially below 2.0 suggest positive autocorrelation, while values above 2.0 suggest negative autocorrelation.

**Table 12**

*Durbin–Watson Test for Autocorrelation of Regression Residuals*

Model	DW Statistic	p-Value	Interpretation
Performance ~ Strategic Management Processes (All)	2.06	0.652	No autocorrelation
Performance ~ Strategic Planning	2.11	0.745	No autocorrelation
Performance ~ Strategy Implementation	2.18	0.858	No autocorrelation
Performance ~ Strategy Evaluation	2.08	0.683	No autocorrelation
Performance ~ Strategic Control	2.03	0.580	No autocorrelation

All five regression models produced Durbin–Watson (DW) statistics ranging from 2.03 to 2.18, which are very close to the ideal value of 2.0. These values indicate that the

residuals from each regression are essentially independent. Accordingly, there is no evidence of either positive or negative autocorrelation across observations for any of the models estimated. This means that the standard errors and significance tests for the regression coefficients can be considered reliable and unbiased, satisfying the independence-of-errors assumption required for ordinary least squares regression.

#### 4.6.4 Homoscedasticity

Homoscedasticity means that the variance of the regression residuals is constant across the range of fitted values. When this assumption is met, standard errors are reliable, and hypothesis tests remain valid. This study assessed homoscedasticity using the Breusch–Pagan test and a White-type test. A p-value greater than 0.05 indicates that the null hypothesis of constant variance cannot be rejected.

**Table 13**

*Homoscedasticity Diagnostics for Regression Residuals*

Model	BP $\chi^2$	BP df	BP p	White $\chi^2$	White df	White p	Interpretation
Performance Strategic Management Processes (All)	~ 9.81	4	0.0537	1.50	2	0.471	Homoscedastic (assumption met)
Performance Strategic Planning	~ 3.63	1	0.0566	3.77	2	0.152	Homoscedastic (assumption met)
Performance Strategy Implementation	~ 3.25	1	0.0716	3.25	2	0.197	Homoscedastic (assumption met)
Performance Strategy Evaluation	~ 2.25	1	0.1340	2.33	2	0.313	Homoscedastic (assumption met)
Performance Strategic Control	~ 0.30	1	0.5870	1.61	2	0.448	Homoscedastic (assumption met)

Across all five regression models, both the Breusch–Pagan and White tests returned non-significant p-values (all above 0.05). The BP  $\chi^2$  statistics ranged from 0.30 to 9.81 and

the White  $\chi^2$  statistics from 1.50 to 3.77, with all p-values indicating that the null hypothesis of homoscedasticity could not be rejected. This means that the variance of the residuals is effectively constant across fitted values for each model. The assumption of homoscedasticity is satisfied, and the standard errors and significance tests of the regression coefficients can be interpreted as reliable and unbiased.

#### **4.7 Regression Analysis**

After confirming the reliability of the measurement scales and satisfying the key statistical assumptions (normality, multicollinearity, autocorrelation, and homoscedasticity), regression analysis was undertaken to test the study's hypotheses on the relationship between strategic management processes and the performance of dairy agribusiness SMEs. Regression was used to estimate the extent to which each strategic management process (strategic planning, strategy implementation, strategy evaluation, and strategic control) predicts variation in firm performance while controlling for other factors. In line with the study objectives, a series of bivariate regressions was first conducted to examine the individual predictive effect of each strategic construct on performance. For each model, the output reports R<sup>2</sup>, Adjusted R<sup>2</sup>, RMSE, F-statistic, and p-value from the model summary; sums of squares, mean squares, F-statistic, and p-value from the ANOVA table; and the estimated regression coefficients (Estimate, Std. Error, t-value, p-value, and 95% confidence interval limits).

##### **4.7.1 Bivariate Regression on Strategic Planning and Performance of Dairy Agribusiness SMEs**

To assess the extent to which strategic planning contributes to the performance of dairy agribusiness SMEs in Murang'a County, a simple linear regression model was estimated with performance as the dependent variable and strategic planning as the predictor. This model evaluates whether firms that engage more consistently in planning activities, such

as goal setting, prioritization, and resource alignment, demonstrate higher performance levels than those that rely on informal or reactive approaches. The model fit statistics presented in Table 14 summarize the strength of this predictive relationship and indicate how well strategic planning explains variations in performance among the sampled enterprises.

**Table 14**

*Model Summary for Performance ~ Strategic Planning*

Model	R	R <sup>2</sup>	Adj_R <sup>2</sup>	RMSE	F	p_value
Performance ~ Strategic Planning	0.2173	0.0472	0.0405	0.7182	6.9926	0.0091

Table 14 presents the model fit statistics for the regression of performance on strategic planning. The correlation coefficient ( $R = .2173$ ) indicates a small positive relationship, showing that as strategic planning improves, performance tends to increase slightly. The coefficient of determination ( $R^2 = .0472$ ) shows that strategic planning explains about 4.7 percent of the variation in performance among dairy agribusiness SMEs, meaning that while planning contributes to performance, most of the variance is driven by other organizational or environmental factors. The adjusted  $R^2$  (.0405) provides a more conservative estimate, confirming that after adjusting for sample size and model simplicity, strategic planning still accounts for roughly 4 percent of performance differences. The model summary shows that strategic planning is a statistically significant but modest predictor of performance, consistent with the view that a combination of strategic, operational, environmental, and financial factors influences performance in dairy SMEs.

The table below displays the ANOVA results, which test the overall significance of the regression model.

**Table 15***ANOVA for Performance ~ Strategic Planning*

Model	term	df	sumsq	meansq	statistic	p.value
Performance ~ Strategic Planning	Strategic Planning	1	3.6073	3.6073	6.9926	0.0091
Strategic Planning	Residuals	141	72.739	0.5159		
	Total	142	76.346	0.5376		

The ANOVA shows that the regression of performance on strategic planning is statistically significant ( $p = .009$ ), confirming that the model provides a better fit than a model with no predictors.

The table below presents the estimated regression parameters, indicating the size and direction of the effect of strategic planning on performance.

**Table 16***Regression Coefficients for Performance ~ Strategic Planning*

Model	Term	Estimate	Std_Error	t_value	p_value	CI_Lower	CI_Upper
Performance ~ Strategy Planning	Intercept	1.6576	0.2907	5.702	0.0000	1.0829	2.2324
Performance ~ Strategy Planning	Strategy Planning	0.2483	0.0939	2.6443	0.0091	0.0627	0.4339

Strategic planning was a significant positive predictor of performance,  $B = 0.25$ ,  $SE = 0.09$ ,  $t(141) = 2.64$ ,  $p = .009$ , 95% CI [0.06, 0.43]. This means that for each one-unit increase in strategic planning score, performance increased by an estimated 0.25 units. The intercept of 1.66 represents the expected performance score when strategic planning is zero for dairy agribusiness SMEs.

#### 4.7.2 Bivariate Regression on Strategic Implementation and Performance of Dairy Agribusiness SMEs

To further examine the contribution of strategic management processes to enterprise performance, a second simple linear regression model was estimated to test the effect of strategy implementation on performance among dairy agribusiness SMEs. This model evaluates whether the extent to which firms translate their plans into coordinated actions helps explain variations in performance outcomes. Since implementation determines how well-planned activities are executed on the ground, assessing its predictive value provides insight into whether stronger execution practices are associated with superior performance within the sampled enterprises. Table 17 presents the model fit statistics summarizing the strength and significance of this relationship.

**Table 17**

*Model Summary for Performance ~ Strategic Implementation*

Model	R	R2	Adj_R2	RMSE	F	p_value
Performance ~ Strategy Implementation	0.1942	0.0377	0.0309	0.7218	5.5279	0.0201

Table 17 shows that the regression model examining the effect of strategy implementation on performance was statistically significant,  $F(1, 141) = 5.53$ ,  $p = .020$ . The correlation coefficient ( $R = .1942$ ) indicates a small positive relationship between the two variables, suggesting that firms with better implementation practices tend to report slightly higher performance outcomes. The coefficient of determination ( $R^2 = .0377$ ) shows that strategy implementation accounts for approximately 3.8 percent of the variance in performance.

To assess whether strategy implementation meaningfully contributes to explaining differences in performance, an Analysis of Variance (ANOVA) was used to compare the

regression model with a baseline model containing no predictors. ANOVA helps determine whether the variation in performance associated with implementation practices is statistically greater than what could be attributed to random error. Table 18 summarizes the results of this comparison for the regression of performance on strategy implementation.

**Table 18**

*ANOVA for Performance ~ Strategic Implementation*

Model	term	df	sumsq	meansq	statistic	p.value
Performance ~ Strategy Implementation	Strategy	1	2.8802	2.8802	5.5279	0.0201
	Implementation					
	Residuals	141	73.4661	0.521		
	Total	142	76.3463	0.5376		

Table 18 shows that the inclusion of strategy implementation as a predictor results in a statistically significant improvement in model fit,  $F(1, 141) = 5.53$ ,  $p = .020$ . Although the magnitude of this explained variance is relatively small compared with the residual error, the significant F-statistic confirms that implementation practices have a meaningful influence on performance outcomes. This reinforces the determination that strategy implementation contributes unique explanatory value within the model.

To provide a clearer understanding of how strategy implementation influences performance, the unstandardized regression coefficients were examined. These coefficients quantify the extent to which performance is expected to change for every one-unit increase in the implementation score, while the associated standard errors and confidence intervals indicate the reliability of these estimates. Table 19 presents the detailed coefficient results for this model.

**Table 19***Regression Coefficients for Performance ~ Strategic Planning*

Model	Term	Estimate	Std. Error	t-value	p-value	CI_Lower	CI_Upper
Performance ~ Strategy Implementation	Intercept	1.74	0.289	6.02	0.00	1.172	2.316
		44	4	84	00	4	5
Performance ~ Strategy Implementation	Strategy Implementation	0.22	0.095	2.35	0.02	0.035	0.413
		44	4	12	01	7	

The regression output in Table 19 shows that strategy implementation has a significant positive effect on performance,  $B = 0.22$ ,  $SE = 0.10$ ,  $t(141) = 2.35$ ,  $p = .020$ , with a 95 percent confidence interval of 0.036 to 0.413. This coefficient implies that even incremental improvements in implementation, such as clearer role assignments, consistent follow-through on planned activities, or better coordination, are associated with meaningful increases in performance ( $B = 0.22$ ). The significant positive coefficient suggests that firms that execute their plans more systematically tend to achieve better operational and financial outcomes than those relying on less coordinated or ad hoc approaches.

#### **4.7.3 Bivariate Regression on Strategic Evaluation and Performance of Dairy Agribusiness SMEs**

To assess whether monitoring and reviewing strategic activities contribute to differences in enterprise performance, a third simple linear regression model was estimated with strategy evaluation as the predictor and performance as the dependent variable. Strategy evaluation reflects the extent to which firms track progress, analyse results, identify deviations, and use feedback to improve decision-making. Examining its predictive value allows the study to determine whether more systematic evaluation processes are

associated with stronger performance among dairy agribusiness SMEs. Table 20 summarises the model fit indices that describe the strength, direction, and significance of this relationship.

**Table 20**

*Model Summary for Performance ~ Strategic Evaluation*

Model	R	R <sup>2</sup>	Adj_R2	RMSE	F	p_value
Performance ~ Strategy Evaluation	0.1836	0.0337	0.0268	0.7233	4.9127	0.0283

Table 20 shows that the regression model testing the effect of strategy evaluation on performance was statistically significant,  $F(1, 141) = 4.91$ ,  $p = .028$ . The correlation coefficient ( $R = .1836$ ) indicates a small positive relationship, suggesting that SMEs with more consistent evaluation practices tend to perform slightly better than those with weaker or irregular review mechanisms. The coefficient of determination ( $R^2 = .0337$ ) reveals that strategy evaluation explains about 3.4 percent of the variance in performance. The results suggest that even small improvements in evaluation—such as regular reviews, tracking indicators, and analysing performance outcomes—are meaningfully associated with differences in enterprise performance among dairy agribusiness SMEs.

To determine whether strategy evaluation contributes significantly to explaining differences in performance among dairy agribusiness SMEs, an Analysis of Variance (ANOVA) was conducted. This test assesses whether including strategy evaluation as a predictor improves the regression model beyond what would be expected from random variation alone. By comparing the variance attributed to strategy evaluation against the residual variance, ANOVA provides a statistical basis for evaluating the overall

meaningfulness of the predictor. Table 21 reports the ANOVA statistics for the regression of performance on strategy evaluation.

**Table 21**

*ANOVA for Performance ~ Strategic Evaluation*

Model	term	df	sumsq	means q	statisti c	p.valu e
Performance ~Strategy Evaluation	Strategy	1	2.5705	2.5705	4.9127	0.028
	Evaluation					3
	Residuals	141	73.7758	0.5232		
	Total	142	76.3463	0.5376		

Table 21 shows that strategy evaluation accounts for a statistically significant portion of the variance in performance,  $F(1, 141) = 4.91, p = .028$ . The sum of squares attributed to strategy evaluation ( $SS = 2.57$ ) is meaningfully larger than the portion expected by chance, indicating that evaluation practices contribute to explaining performance differences across firms. Although the effect size is modest, the statistically significant p-value demonstrates that strategy evaluation improves the predictive capacity of the model relative to a model without any predictors. This reinforces the earlier model summary findings, confirming that evaluation activities play a meaningful role in shaping performance outcomes among dairy agribusiness SMEs.

To further clarify the nature and magnitude of the relationship between strategy evaluation and performance, the regression coefficients were examined. These coefficients indicate how performance changes for each one-unit increase in strategy evaluation, while the associated standard errors, test statistics, and confidence intervals provide information about the precision and significance of these estimates. Table 22 presents the unstandardized coefficients and relevant inferential statistics for the model.

**Table 22***Regression Coefficients for Performance ~ Strategic Evaluation*

Model	Term	Estimate	Std_Error	t_value	p_value	CI_Lower	CI_Upper
Performance ~ Strategy Evaluation	Intercept	1.7877	0.2871	6.226	0.0000	1.22	2.3553
	Strategy Evaluation	0.2006	0.0905	2.2165	0.0283	0.0217	0.3794

As shown in Table 22, strategy evaluation was a statistically significant positive predictor of performance,  $B = 0.20$ ,  $SE = 0.09$ ,  $t(141) = 2.22$ ,  $p = .028$ , with a 95% confidence interval ranging from 0.022 to 0.379. This finding indicates that a one-unit increase in the strategy evaluation score is associated with an estimated 0.20-unit increase in performance, suggesting that firms engaging more consistently in review and assessment activities tend to achieve slightly better performance outcomes. These results suggest that, even when considered alone, more systematic evaluation of strategies is associated with better performance among the surveyed dairy agribusiness SMEs.

#### **4.7.4 Bivariate Regression on Strategic Control and Performance of Dairy Agribusiness SMEs**

To further understand how the different dimensions of strategic management influence enterprise outcomes, the study examined the effect of strategic control on performance among dairy agribusiness SMEs. Strategic control reflects the extent to which firms continuously monitor their operations, enforce standards, coordinate activities, and initiate corrective actions when deviations occur. Since control mechanisms determine whether strategic intentions are sustained during day-to-day execution, assessing their predictive value provides insight into whether stronger oversight systems translate into better organisational results. Table 23 presents the statistical summary of this

relationship, showing how well strategic control accounts for variation in performance across the sampled firms.

**Table 23**

*Model Summary for Performance ~ Strategic Control*

Model	R	R2	Adj_R2	RMSE	F	p_value
Performance ~ Strategic Control	0.2147	0.0461	0.0394	0.7187	6.8175	0.01

Table 23 indicates that the regression model examining the effect of strategic control on performance was statistically significant,  $F(1, 141) = 6.82$ ,  $p = .010$ . The correlation coefficient ( $R = .2147$ ) shows a small positive association, suggesting that enterprises with more developed control mechanisms tend to report slightly higher performance levels. The coefficient of determination ( $R^2 = .0461$ ) reveals that strategic control explains approximately 4.6 percent of the variation in performance. The findings suggest that firms with stronger, more consistent control practices achieve better performance outcomes, reinforcing the managerial importance of maintaining systematic oversight within the dairy agribusiness sector.

To further assess whether strategic control significantly contributes to explaining differences in performance, an Analysis of Variance (ANOVA) was conducted. ANOVA evaluates whether the inclusion of strategic control as a predictor leads to a statistically meaningful improvement in model fit compared to a model with no explanatory variables. Table 24 presents the ANOVA results for the regression of performance on strategic control.

**Table 24***ANOVA for Performance ~ Strategic Control*

Model	term	df	sumsq	meansq	statistic	p.value
Performance ~ Strategic Control	Strategy	1	3.5212	3.5212	6.8175	0.01
	Control					
	Residuals	141	72.8251	0.5165		
Total		142	76.3463	0.5376		

Table 24 shows that the regression model including strategic control as a predictor yields a statistically significant improvement in explained variance compared to a null model,  $F(1, 141) = 6.82, p = .010$ . Although the effect size is modest, the significant p-value confirms that the contribution of strategic control is unlikely to be due to random variation.

To understand the magnitude and direction of the relationship between strategic control and performance, the unstandardized regression coefficients were examined. These coefficients indicate how much the performance score is expected to change for each one-unit increase in strategic control while holding all other influences constant. Table 25 presents the coefficient estimates, standard errors, test statistics, p-values, and confidence intervals.

**Table 25***Regression Coefficients for Performance ~ Strategic Control*

Model	Term	Estimate	Std_Error	t_value	p_value	CI_Lower	CI_Upper
Performance ~ Strategic Control	Intercept	1.6207	0.3081	5.2593	0.0000	1.0115	2.2298
	Strategy Control	0.2619	0.1003	2.611	0.0100	0.0636	0.4603

As shown in Table 25, strategic control was a statistically significant positive predictor of performance,  $B = 0.26$ ,  $SE = 0.10$ ,  $t(141) = 2.61$ ,  $p = .010$ , with a 95 percent confidence interval ranging from 0.064 to 0.460. This coefficient indicates that for every one-unit increase in the strategic control score, the performance score is expected to increase by approximately 0.26 units, reflecting a small but meaningful effect. The intercept value of 1.62 represents the predicted performance score when strategic control is zero, suggesting that even firms with minimal oversight mechanisms maintain a baseline level of performance. The direction and magnitude of the coefficient imply that enterprises with stronger monitoring, coordination, and corrective mechanisms tend to achieve slightly better performance outcomes than those with weaker control practices. The narrow confidence interval and statistically significant t-value strengthen confidence in the reliability of this relationship.

#### **4.7.5 Overall Regression on the Strategic Management Processes on Performance of Dairy Agribusiness SMEs**

After examining each strategic management dimension individually, a multiple regression model was estimated to assess their combined influence on the performance of dairy agribusiness SMEs. This overall model evaluates how much variance in performance can be jointly explained by strategic planning, strategy implementation, strategy evaluation, and strategic control when entered together as predictors.

The overall model summary in the table below shows that the four strategic management processes together accounted for about 15.6% of the variance in performance,  $R^2 = .156$ , Adjusted  $R^2 = .132$ ,  $RMSE = 0.68$ . The model was statistically significant,  $F(4,138) = 6.39$ ,  $p < .001$ , indicating that, taken together, the strategic management processes provide a meaningful explanation of differences in performance across firms.

**Table 26***Overall Model Summary for Performance ~ Strategic Management Process*

Model	R2	Adj_R2	RMSE	F	p_value
Performance ~ Strategic Planning + Strategy Implementation + Strategy Evaluation + Strategic Control	0.1562	0.1318	0.6832	6.3869	0.0001

The ANOVA breakdown as shown below indicates that each predictor made a statistically significant contribution to the model when controlling for the others: strategic planning,  $F(1,138) = 7.73$ ,  $p = .006$ ; strategy implementation,  $F(1,138) = 6.49$ ,  $p = .012$ ; strategy evaluation,  $F(1,138) = 5.33$ ,  $p = .022$ ; and strategic control,  $F(1,138) = 5.99$ ,  $p = .016$ . This confirms that all four constructs are relevant predictors rather than redundant variables.

**Table 27***Overall ANOVA Summary for Performance ~ Strategic Management Process*

Model	term	df	sumsq	meansq	statistic	p.value
Performance ~ Strategic Planning + Strategy Implementation + Strategy Evaluation + Strategic Control	Strategic Planning	1	3.6073	3.6073	7.7275	0.0062
	Strategy Implementation	1	3.0291	3.0291	6.4890	0.0120
	Strategy Evaluation	1	2.4891	2.4891	5.3320	0.0224
	Strategy Control	1	2.8005	2.8005	5.9992	0.0156
	Residuals	138	64.4203	0.4668		
Total		142	76.3463	0.5376		

**Table 28**

*Overall Regression Coefficients Summary for Performance ~ Strategic Management Process*

Model	Term	Estimate	Std_Error	t_value	p_value	CI_Lower	CI_Upper
Performance ~ Strategic	Intercept	-0.2601	0.5321	-	0.6258	-1.3121	0.7920
				0.4888			
Planning + Strategy	Strategic	0.2690	0.0895	3.0065	0.0031	0.0921	0.4459
	Planning						
Implementation + Strategy	Strategy	0.2037	0.0907	2.2464	0.0263	0.0244	0.3830
	Implementation						
Evaluation + Strategic Control	Strategy	0.1743	0.0863	2.0204	0.0453	0.0037	0.3449
	Evaluation						
	Strategy	0.2357	0.0963	2.4493	0.0156	0.0454	0.4261
	Control						

The regression coefficient estimates showed that strategic planning emerged as a significant positive predictor of performance ( $B = 0.27$ ,  $SE = 0.09$ ,  $t(138) = 3.01$ ,  $p = .003$ , 95% CI [0.09, 0.45]). This means that, holding the other strategic management processes constant, a one-unit increase in the strategic planning score was associated with an estimated 0.27-unit increase in the performance score of dairy agribusiness SMEs. Strategy implementation was also significant ( $B = 0.20$ ,  $SE = 0.09$ ,  $t(138) = 2.25$ ,  $p = .026$ , 95% CI [0.02, 0.38]), indicating that firms reporting stronger implementation practices tended to achieve higher performance outcomes. Strategy evaluation showed a smaller but still significant effect ( $B = 0.17$ ,  $SE = 0.09$ ,  $t(138) = 2.02$ ,  $p = .045$ , 95% CI [0.004, 0.345]), suggesting that systematic evaluation activities also contribute to improved performance.

Likewise, strategic control retained a significant positive coefficient ( $B = 0.24$ ,  $SE = 0.10$ ,  $t(138) = 2.45$ ,  $p = .016$ , 95% CI [0.045, 0.426]), reflecting the performance benefits of effective monitoring, coordination, and adjustment mechanisms. By contrast, the

intercept was not statistically significant ( $B = -0.26$ ,  $SE = 0.53$ ,  $t(138) = -0.49$ ,  $p = .626$ ), indicating that the baseline performance score is not meaningfully different from zero when all predictor variables are at zero.

These results demonstrate that the combination of strategic planning, strategy implementation, strategy evaluation, and strategic control explains a larger share of performance variance than any single process on its own. Each construct retains a unique and significant positive contribution to predicting performance after controlling for the others. In practical terms, dairy agribusiness SMEs reporting stronger practices across all four stages of the strategic management cycle tend to achieve better performance outcomes. This finding provides empirical support for the study's central proposition that performance improvements are driven not by isolated practices but by a coordinated and well-integrated approach to strategic management.

#### **4.8 Hypothesis Testing**

The study formulated four null hypotheses to assess the independent effects of strategic planning, strategy implementation, strategy evaluation, and strategic control on the performance of dairy agribusiness SMEs. Each hypothesis was tested using the corresponding bivariate regression model, with significance assessed at the 0.05 level.

*H<sub>01</sub>: Strategic planning has no significant effect on the performance of dairy agribusiness SMEs*

The results show that strategic planning is a statistically meaningful predictor of performance,  $B = 0.25$ ,  $SE = 0.09$ ,  $t(141) = 2.64$ ,  $p = .009$ . Firms that articulate their priorities clearly, organize their resources methodically, and anticipate operational demands tend to exhibit more coherent performance trajectories. In the dairy sector, where firms navigate unpredictable milk inflows, shifting input prices, and seasonal

constraints, enterprises that engage in deliberate planning often achieve steadier operational flow and more competitive market presence. Planning provides a reference point for decision-making and helps firms prepare for the recurrent volatility in dairy supply chains.

*H<sub>02</sub>: Strategy implementation has no significant effect on the performance of dairy agribusiness SMEs*

The analysis demonstrates that strategy implementation bears a positive and statistically significant relationship with performance,  $B = 0.22$ ,  $SE = 0.10$ ,  $t(141) = 2.35$ ,  $p = .020$ . Execution of planned activities requires coordination across daily operational routines, including timely collection, careful handling, effective production scheduling, and adherence to quality standards. Dairy agribusinesses that translate their plans into consistent operational behavior are often better positioned to minimize losses and reliably meet customer expectations. Effective implementation enhances efficiency, supports product consistency, and reinforces the firm's strategic direction. The statistical results do not support the null hypothesis, leading to its rejection.

*H<sub>03</sub>: Strategy evaluation has no significant effect on the performance of dairy agribusiness SMEs*

The findings reveal a significant association between strategy evaluation and performance,  $B = 0.20$ ,  $SE = 0.09$ ,  $t(141) = 2.22$ ,  $p = .028$ . Regular assessment of strategic outcomes enables firms to learn from experience, identify emerging inefficiencies, and take corrective steps that sustain competitiveness. In the dairy industry, where quality assurance and regulatory compliance must be consistently upheld, firms that carefully examine their results often maintain higher operational discipline and fewer deviations from expected standards. Evaluation practices strengthen

the internal feedback loop needed to refine processes and adapt to changing operating conditions.

*H<sub>04</sub>: Strategic control has no significant effect on the performance of dairy agribusiness SMEs*

Strategic control emerged as a significant predictor of performance,  $B = 0.26$ ,  $SE = 0.10$ ,  $t(141) = 2.61$ ,  $p = .010$ . Oversight mechanisms help firms maintain alignment between intended strategies and daily practices, and they enable managers to intervene when performance drifts from expected levels. In a sector characterised by cold-chain vulnerabilities, stringent quality requirements, and competition from larger processors, enterprises that maintain robust monitoring and corrective measures usually achieve steadier operational outcomes. Strategic control enables timely responses to supply irregularities, quality issues, and coordination gaps.

All four hypotheses were rejected, confirming that each component of the strategic management process, planning, implementation, evaluation, and control, contributes significantly to performance outcomes among dairy agribusiness SMEs. These results demonstrate that performance gains emerge not from a single managerial action but from coordinated strategic behavior across the entire management cycle.

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS**

#### **5.1 Introduction**

This chapter provides an integrated interpretation of the study's findings by connecting the empirical results with the conceptual and theoretical foundations established earlier in the research. It examines each strategic management process in relation to performance. It explains how the observed patterns align with or diverge from existing literature and the realities of dairy agribusiness SMEs in Murang'a County. Building on this analysis, the chapter draws together the main conclusions that can be inferred from the data and translates them into practical recommendations for managers, policymakers, and supporting institutions within the dairy value chain. It also outlines the study's contributions to knowledge and identifies areas warranting further research, thereby creating a coherent transition from the empirical evidence to broader scholarly and practical implications.

#### **5.2 Summary of Findings**

The summary of findings provides an integrated overview of the empirical analysis results and brings together the key patterns across the four strategic management processes investigated in the study. It outlines how strategic planning, strategy implementation, strategy evaluation, and strategic control relate to the performance of dairy agribusiness SMEs in Murang'a County and highlights the major relationships observed in both the descriptive and inferential results.

##### **5.2.1 Strategic Planning and Performance of Dairy Agribusiness SMEs**

The evidence from the study shows that strategic planning is present across many dairy agribusiness SMEs, although the degree of structure and consistency with which it is

applied varies noticeably from one enterprise to another. A significant share of managers appears to acknowledge the importance of planning, yet their routines often remain informal, shaped largely by experience, intuition, and the practical demands of daily operations. The pattern of responses suggests that while planning is recognized conceptually, it is not always translated into deliberate, systematic practices such as formal goal setting, structured market appraisal, or proactive resource alignment. Only a smaller cohort of firms showed signs of more mature planning, reflecting differences in managerial exposure, governance structures, and the operational complexity of the enterprise.

When performance is examined in relation to these planning practices, the statistical results offer a useful perspective on what planning contributes to performance. The positive, significant coefficient for strategic planning indicates that firms with more deliberate planning tendencies generally achieve better performance outcomes. A noticeable rise in firm performance accompanies an improvement in the planning score. Although this improvement is not large, it remains meaningful in an industry where many constraints lie outside managerial control. Planning equips managers with clearer priorities, helps them anticipate disruptions in milk supply, supports better coordination of labour and inputs, and reduces the likelihood of avoidable losses. The findings therefore, position strategic planning as a foundational capability that strengthens enterprise resilience and enhances the overall quality of managerial decision-making in Murang'a's dairy sector.

These findings are consistent with the literature on agribusiness and SMEs showing that formal planning enhances firm performance. For instance, a study of agribusiness SMEs in Kenya found that firms with more systematic planning practices recorded better operational outcomes and sustainability (Kamau, Muli, & Muriithi, 2021). Similarly,

another study reviewed several agricultural firms and found that they lack long-term plans or formal strategic frameworks, suggesting that where planning is more mature, performance is stronger (Bittner, Marczin & Kovács, 2023). The relatively strong association found in this study supports the notion that even in contexts where planning is only partially institutionalized, its adoption still conveys measurable performance benefits. However, the high proportion of neutral responses suggests that many firms are still in early stages of formalizing planning. This gap may reflect resource constraints, managerial capabilities, or contextual specificities in Murang'a County, differentiating them from more advantaged agribusinesses studied elsewhere.

### **5.2.2 Strategic Implementation and Performance of Dairy Agribusiness SMEs**

The results on strategy implementation reveal a landscape in which many dairy agribusiness SMEs carry out elements of their planned activities, but with considerable variation in consistency and depth. The dominance of neutral responses across several items suggests that firms acknowledge implementation practices but may not apply them with sustained discipline. Even so, some aspects, such as maintaining orderly reporting channels and linking routine operations to stated strategic priorities, attracted more agreement, suggesting that the basic mechanics of execution are recognised and practised across a number of enterprises. The range of means and standard deviations indicates that SMEs do not approach implementation uniformly. Instead, firms appear to be at different levels of maturity, with some exhibiting structured operational follow-through while others remain uncertain about the extent to which implementation supports their long-term aims.

The regression results provide a clearer indication of why these patterns matter. The statistical test confirmed that better implementation practices are associated with higher performance, and the coefficient's significance indicates that execution contributes

meaningfully to how well these enterprises function. A firm that improves how it translates strategy into action can expect its performance to rise in a measurable way, even if the overall magnitude of the effect remains modest. The finding highlights the practical role of implementation, since it is through daily routines and coordinated activities that strategic intent is realised within the enterprise. The evidence therefore suggests that when SMEs improve the stability and coherence of their implementation practices, they build a firmer foundation for better results, demonstrating that effective execution is an important ingredient in the performance outcomes observed among the surveyed firms.

These findings align with the empirical literature, which emphasizes that implementation discipline is a pivotal determinant of performance outcomes in the dairy sector. Koori, Kirimi, and Kihara (2017) reported that consistent execution of strategic initiatives such as improved feed management, recordkeeping, and cold-chain investments was positively associated with technical efficiency scores and milk output per cow among dairy SMEs in Central Kenya. Similarly, Kaara et al. (2021) found that dairy cottage industries in Murang'a County which effectively implemented product innovation, branding, and value-addition strategies recorded higher sales growth and customer retention. At the international level, Zhang et al. (2022) demonstrated that agri-food SMEs institutionalizing implementation structures; staff training, performance monitoring, and inter-departmental coordination, realized measurable improvements in process efficiency and market responsiveness. Collectively, this evidence reinforces the conclusion that robust, structured strategy implementation remains essential for translating well-formulated plans into tangible performance gains among dairy agribusiness SMEs in Kenya and beyond.

### **5.2.3 Strategic Evaluation and Performance of Dairy Agribusiness SMEs**

The results indicate that dairy agribusiness SMEs in Murang'a County are in the early stages of institutionalizing strategic evaluation processes. Across most items, neutral responses ranged from 45 percent to 53 percent, suggesting that while firms recognise the relevance of strategic evaluation, many have not yet embedded these practices consistently within their managerial routines. Nonetheless, areas such as adaptability and accountability reveal emerging strengths. For instance, a notable proportion of respondents agreed with their firms' willingness to adjust strategies when evaluation results warrant change, as well as with the clarity of benchmarks and evaluation criteria. The observed mean scores, together with their variation, suggest that evaluation mechanisms are generally present but differ considerably in depth and maturity across enterprises. This pattern reflects a sector in transition, where strategic evaluation is increasingly recognized as a managerial necessity but is still evolving into a systematic, fully integrated practice.

Regression findings further illuminate the contribution of these evaluation practices to firm performance. The analysis shows a statistically significant yet moderate positive relationship, indicating that enterprises engaging more deliberately in strategic assessment tend to exhibit improved performance outcomes. The magnitude of the coefficient suggests that enhanced evaluation efforts translate into incremental performance gains, underscoring the role of reflective learning within the strategic management cycle. Although the model explains only a small share of the performance variance, the effect's significance affirms that structured evaluation practices provide tangible value. This implies that dairy agribusiness SMEs that strengthen their capacity to monitor progress, analyse outcomes, and recalibrate their strategies are better positioned to enhance operational effectiveness and overall performance.

These results broadly align with studies linking evaluation practices to SME performance, but the effect sizes here are somewhat smaller. For instance, Mwangi and Kariuki (2023) found that robust evaluation systems accounted for 8%–10% of the variance in performance among Kenyan manufacturing SMEs, while Chikozho (2022) reported similarly positive though modest effects in Zimbabwean agribusiness cooperatives. The lower coefficient observed in this study may reflect the relatively nascent nature of evaluation systems in Murang'a dairy SMEs compared to other sectors. Nonetheless, the positive and significant association supports the argument that even incremental improvements in evaluation, such as clearer criteria, stakeholder involvement, and feedback loops, can yield measurable performance gains in small agribusiness enterprises.

#### **5.2.4 Strategic Control and Performance of Dairy Agribusiness SMEs**

The overall pattern of responses suggests that strategic control within dairy agribusiness SMEs operates more as an emerging management routine than a fully entrenched organisational system. Across all items, neutral ratings were the most common, reflecting firms that acknowledge the presence of monitoring and coordination processes but still grapple with applying them consistently. Many enterprises appear to have clearer structures for distributing tasks and communicating responsibilities, and these areas drew higher levels of agreement. On the other hand, capabilities that require more deliberate managerial investment, such as leadership-driven oversight, technology-supported monitoring, and cross-functional communication, show weaker endorsement. This mixture of structured and underdeveloped elements points to firms that are in the process of shaping, rather than fully executing, a coherent strategic control framework.

The regression results place the importance of these mechanisms into sharper focus. The analysis confirms that strategic control has a statistically significant positive association

with firm performance, suggesting that even partial or uneven systems of oversight contribute to better outcomes. The coefficient indicates that SMEs that show stronger tendencies toward monitoring, coordination, and follow-through tend to achieve better operational results, even though the overall explanatory power of the model remains modest. What emerges is a picture in which strategic control functions as a practical lever: when firms tighten reporting lines, reinforce accountability structures, and maintain regular oversight, they create conditions that enable performance improvements. In this regard, strengthening control systems is not merely an administrative exercise but a pathway for dairy agribusiness SMEs to stabilise their operations and respond more effectively to performance demands.

This pattern of results is consistent with prior studies, which have shown that clear control systems and leadership accountability improve SME outcomes. For instance, Kaara, Njoroge, and Mwangi (2021) reported that dairy cottage industries in Murang'a County with stronger operational and information control systems achieved significantly higher customer retention and profitability. In a related context, Kibicho and Muturi (2022) found that cross-functional control mechanisms enhanced decision-making speed and market responsiveness in Kenyan agro-processing SMEs. International evidence also highlights similar effects: Osei and Boateng (2023) demonstrated that African agribusiness SMEs that used technology-driven control systems improved their efficiency and financial performance by 12%–15% over a 2-year period. The present study's results align with this body of literature by confirming that, even in smaller dairy enterprises, strategic control makes a measurable contribution to improved performance.

## **5.3 Conclusions**

### **5.3.1 Strategic Planning and Performance of Dairy Agribusiness SMEs**

The study establishes that strategic planning has a clear, statistically significant influence on the performance of dairy agribusiness SMEs in Murang'a County. Regression results confirmed a positive association, indicating that firms engaging in structured planning activities, such as articulating long-term objectives, conducting environmental scans, and aligning resources with anticipated market demands, achieved stronger outcomes in profitability, productivity, and market expansion. Descriptive evidence further supports this relationship, with higher agreement on planning-related items among better-performing firms. These practices enhanced operational clarity, improved internal coordination, and allowed firms to interpret market signals more effectively. This reinforces the theoretical perspective that strategic planning provides direction and strengthens decision-making capacity in dynamic environments.

Despite these gains, the findings reveal considerable differences in the depth of planning practices across SMEs. A significant proportion of enterprises reported neutral or inconsistent approaches to planning, suggesting limited institutionalization of formal planning processes. These firms tended to exhibit weaker performance, underscoring the limitations of informal or reactive planning in managing market fluctuations and operational uncertainties. The study therefore concludes that embedding structured planning routines through consistent environmental monitoring, explicit goal setting, and systematic resource prioritization is essential for enhancing competitiveness and building organizational resilience. Strengthening the strategic planning function is both a managerial necessity and a practical pathway for dairy agribusiness SMEs seeking sustained performance in an increasingly competitive and volatile sector.

### **5.3.2 Strategic Implementation and Performance of Dairy Agribusiness SMEs**

The study finds that strategic implementation plays an important role in enhancing the performance of dairy agribusiness SMEs in Murang'a County, though its effect is moderate compared to other strategic management components. Regression results demonstrate that firms that translated their strategic plans into clearly defined activities reported better outcomes in efficiency, productivity, and goal attainment. Descriptive data also indicated greater agreement on implementation practices among better-performing enterprises, particularly in areas such as communicating expectations, leadership involvement, and allocating required financial and human resources. These practices enabled firms to establish orderly work structures, promote employee participation, and streamline daily operations, confirming that effective implementation is the critical link that transforms strategic intentions into measurable results.

However, the findings also reveal that many enterprises face persistent difficulties in sustaining implementation efforts. Several SMEs indicated inconsistent monitoring routines, weak coordination among departments, and limited managerial capacity to follow through on planned actions. These constraints contributed to neutral or mixed responses on key implementation indicators, reflected in comparatively lower performance scores. The study, therefore, concludes that enhancing strategic implementation requires deliberate managerial commitment, strengthened communication channels, and reliable systems for tracking progress. By building institutional capacity for consistent execution, dairy agribusiness SMEs will be better positioned to realise the full benefits of their strategic plans and improve their overall performance within an increasingly competitive operating environment.

### **5.3.3 Strategic Evaluation and Performance of Dairy Agribusiness SMEs**

The study finds that strategic evaluation has a modest but statistically significant influence on the performance of dairy agribusiness SMEs in Murang'a County. Firms that reviewed their activities more consistently and measured their progress using basic performance indicators recorded comparatively stronger outcomes. Descriptive results showed that respondents acknowledged the usefulness of evaluation in improving accountability and identifying operational gaps, although this acknowledgement was not uniform across all enterprises. These findings support the conclusion that even simple evaluation routines offer value by helping firms clarify their progress and adjust their actions with greater intention.

At the same time, the data reveal that many SMEs have not yet embedded evaluation as a routine managerial practice. Neutral responses were common across several items, indicating uncertainty or irregular application of review processes. In many cases, assessments appeared informal, infrequent, or unsupported by structured tools, limiting firms' ability to track performance trends or act on emerging issues in a timely manner. The study therefore, concludes that the modest effect observed in the regression reflects the uneven adoption of evaluation practices across the sector. Strengthening evaluation systems through regular reviews, clearer indicators, and more consistent follow-up will allow dairy agribusiness SMEs to benefit more fully from the strategic decisions they make and to sustain performance improvements over time.

### **5.3.4 Strategic Control and Performance of Dairy Agribusiness SMEs**

The study shows that strategic control contributes to performance among dairy agribusiness SMEs in Murang'a County, although the influence is relatively modest. The descriptive results revealed that while some firms have established basic routines for monitoring activities, assigning responsibilities, and using simple feedback processes,

these practices are not widespread across the sector. Firms that implemented these foundational control measures demonstrated clearer follow-through on planned tasks and steadier performance. The regression analysis supported these observations by indicating a positive, statistically significant association between strategic control and performance, although the overall impact was limited. This suggests that even basic oversight mechanisms offer practical value when applied consistently.

The findings also show that many enterprises have not yet developed structured control systems, as reflected by the high proportion of neutral responses across several control indicators. In these firms, supervision tends to be informal, monitoring is not carried out on a regular basis, and documentation is minimal. This limits managers' ability to identify operational issues early or to ensure that activities remain aligned with strategic objectives. The modest effect observed in the regression model reflects this uneven pattern of adoption across firms. The study concludes that strengthening strategic control through regular monitoring, clearer reporting practices, and more deliberate follow-up will improve managerial responsiveness and operational stability. Building these internal systems will help dairy agribusiness SMEs support the implementation of their strategies more effectively and sustain better performance outcomes over time.

#### **5.4 Recommendations**

The study's findings provide several actionable recommendations that can inform policy, managerial practice, and scholarly inquiry. Strengthening strategic management practices in dairy agribusiness SMEs requires interventions at both institutional and policy levels, as well as further research to understand how these practices evolve and influence performance over time.

### **5.4.1 Policy Recommendations**

Policymakers at the county and national levels should focus on strengthening the strategic management capacity of dairy agribusiness SMEs, since the study revealed uneven use of planning, implementation, evaluation, and control practices. Capacity-building efforts should prioritise practical training programmes that equip SME owners and managers with skills in market analysis, budgeting, performance tracking, and the use of simple digital tools for monitoring activities. These programmes can be delivered through county enterprise development offices, co-operative societies, and agricultural extension teams, using hands-on approaches such as guided planning sessions, scenario-based exercises, and peer learning groups. Linking access to affordable credit or enterprise grants to the submission of basic strategic plans and progress reports can further encourage firms to institutionalise these practices.

To support consistent evaluation and control, policymakers should promote low-cost digital applications that help SMEs record production data, track sales, monitor costs, and generate simple performance summaries. Partnerships with technology providers, dairy processors, and financial institutions can make these tools more accessible and relevant to small firms. Policy frameworks should also facilitate mentorship arrangements between established agribusinesses and emerging SMEs, enabling practical transfer of effective planning routines, implementation strategies, and evaluation practices. These measures directly address the gaps identified in the study, particularly the high levels of neutrality across several indicators, and offer realistic pathways to improve strategic discipline and enhance enterprise performance over time.

### **5.4.2 Recommendations for Further Research**

Future research should examine more closely why the use of strategic management practices among dairy agribusiness SMEs remains inconsistent, as indicated by the substantial proportion of neutral responses in this study. Longitudinal studies would be valuable in tracing how firms adopt and refine planning, implementation, evaluation, and control practices over time and how these changes influence performance outcomes. Such research would provide clearer evidence of the causal pathways linking strategic practices to business growth. Comparative studies across countries or across different agribusiness value chains can also help identify the environmental and institutional factors that strengthen or weaken the influence of strategic management practices in small firm settings.

Additional research is needed to explore how managers interpret and apply strategic processes in their routine operations. A mixed-methods design that combines quantitative surveys with in-depth interviews or case study observations can offer deeper insight into the practical challenges, cognitive processes, and resource constraints that affect strategy use. There is also a strong need for focused research on the role of digital tools in strengthening monitoring, evaluation, and control functions. The current study highlighted low uptake of technology-driven oversight systems, making this an important area for further inquiry. Future work could test the effectiveness of simple digital applications for tracking performance, improving accountability, or supporting timely decision-making. By addressing these issues, future scholarship can provide more targeted guidance for policymakers and practitioners seeking to improve the strategic capabilities and performance of dairy agribusiness SMEs in Kenya.

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## APPENDICES

### Appendix I: Introduction Letter

Dear Respondent,

My name is Nicholas Obare, a postgraduate student at Kabarak University, Kenya, undertaking research among medium-sized dairy agribusinesses in this area. This study is purely for academic purposes, aimed at understanding the strategic management processes adopted by different agribusinesses and how these have influenced their performance. The information gathered will be used solely for the study, and any responses will be treated with the utmost confidentiality. You will not be quoted anywhere in the report, and, if need be, express consent will be sought.

Yours faithfully,

A handwritten signature in blue ink, appearing to read 'N. Obare'.

Nicholas Owino Obare

## Appendix II: Questionnaire

My name is Nicholas Obare, a postgraduate student at Kabarak University, Kenya. I am currently researching medium-sized agribusinesses in our area. The purpose of this study is to gain insights into the strategic influence of employees employed by various agribusinesses and how these processes have impacted their performance. I assure you that the information gathered from this study will be used solely for academic purposes. Your responses will be treated with the utmost confidentiality, and you will not be quoted anywhere in the generated report without your express consent. Rest assured that your privacy and anonymity are of utmost importance to us. Your participation in this study is greatly appreciated, and it will contribute to advancing our understanding of strategic management in the agribusiness sector. Thank you for taking the time to participate.

Do you have any questions?

1= Yes [ ]

2 = No [ ]

### Section A: Firm Characteristics

Legal structure	<input type="checkbox"/> Sole proprietorship <input type="checkbox"/> , Cooperative <input type="checkbox"/> Corporation <input type="checkbox"/> , Partnership Limited liability company (LLC)
Ownership type	<input type="checkbox"/> Family-owned <input type="checkbox"/> Privately owned <input type="checkbox"/> Publicly traded.
Number of employees	<input type="checkbox"/> Below 10 <input type="checkbox"/> 10-50 <input type="checkbox"/> 51-100 <input type="checkbox"/> 101-500 <input type="checkbox"/> Above 500
Market focus	<input type="checkbox"/> Domestic market <input type="checkbox"/> Export market <input type="checkbox"/> Both domestic and export markets
Marketing and distribution channels	<input type="checkbox"/> Direct sales to consumers <input type="checkbox"/> Wholesale to retailers <input type="checkbox"/> Online sales <input type="checkbox"/> Export channels
Years in operation	<input type="checkbox"/> 1-5 years <input type="checkbox"/> 6-10 years <input type="checkbox"/> 11-15 years <input type="checkbox"/> 16-20 years <input type="checkbox"/> Above 21
Yearly turnover	<input type="checkbox"/> Below 100,000 <input type="checkbox"/> Between 100,000 and 500,000 Above 500,000

Number of farmers under your coverage	Below 50 <input type="checkbox"/> Between 50-150 <input type="checkbox"/> Above 150 <input type="checkbox"/>
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### Section B: Strategic Planning And Performance Of Agribusiness Sme's

Using a scale of 1-5, where 1= strongly disagree; 2=disagree; 3=Neutral; 4=agree; 5=strongly agree; Please indicate the extent to which you agree with the following statement on strategic planning.

Statement	1	2	3	4	5
1) The clearly defined strategic goals of the firm contribute to its performance.					
2) The firm conducts thorough market analysis to identify growth opportunities and improve performance.					
3) The firm effectively utilizes its competitive advantage to enhance performance.					
4) The firm strategically allocates resources to maximize performance.					
5) A well-developed risk management strategy in place in the firm has impacted performance.					
6) The firm embraces innovation and actively adopts new technologies to enhance performance.					
7) The firm engages in long-term planning that contributes to sustained performance.					
8) The firm invests in developing its workforce, which impacts performance.					
9) The firm strategically collaborates with partners to improve performance.					
10) The firm actively monitors and evaluates its strategic planning efforts to ensure improved performance					

**Section C: Strategy Implementation And Performance Of Agribusiness Sme's**

Using a scale of 1-5, where 1= strongly disagree; 2=disagree; 3=Neutral; 4=agree; 5=strongly agree; Please indicate the extent to which you agree with the following statement on strategy implementation.

Statement	1	2	3	4	5
1) The firm allocates its resources (financial, human, and technological) strategically to maximize its performance.					
2) The firm conducts thorough market analysis to identify opportunities and threats that can impact its performance.					
3) The communication channels within the firm support the effective implementation of strategic decisions					
4) Employees in the firm are actively engaged in the strategy development and implementation process.					
5) The firm has well-defined performance metrics in place to assess the progress and effectiveness of strategy implementation.					
6) The leadership of the firm actively supports and champions the implementation of strategic initiatives.					
7) The leadership of the firm actively supports and champions the implementation of strategic initiatives.					
8) The firm regularly reviews and adapts its strategic plans in response to changing market conditions and stakeholder feedback to ensure continued relevance and effectiveness.					
9) Collaboration and coordination among different teams and departments in the firm influence its strategy implementation					
10) The firm emphasizes continuous improvement in the strategy implementation process.					

**Section D: Strategy Evaluation And Financial Performance Of AgribusinessSme’s**

Using a scale of 1-5, where 1= strongly disagree; 2=disagree; 3=Neutral; 4=agree; 5=strongly agree; Please indicate the extent to which you agree with the following statement on strategy evaluation.

<b>Statement</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
1) The firm benchmarks the performance of its strategies against best practices and industry standards.					
2) The firm regularly evaluates its strategies to ensure they are aligned with its goals and objectives.					
3) The communication channels within the firm support the effective implementation of strategic decisions					
4) The firm has clearly defined criteria for evaluating the effectiveness of its strategies.					
5) The firm derives actionable insights from its strategy evaluation processes and uses it to make informed decisions.					
6) The firm uses the findings of strategy evaluation to learn and improve its future strategies.					
7) The firm involves key stakeholders in the strategy evaluation process to gather diverse perspectives.					
8) The firm is open to adapting its strategies based on the outcomes of the evaluation process.					
9) The firm holds individuals and teams accountable for implementing actions derived from strategy evaluation.					
10) The firm conducts strategy evaluation on an ongoing basis to ensure its strategies remain effective.					

### Section E: Strategic Control And Performance Of Agribusiness

Using a scale of 1-5, where 1= strongly disagree; 2=disagree; 3=Neutral; 4=agree; 5=strongly agree; Please indicate the extent to which you agree with the following statement on strategy evaluation.

Statement	1	2	3	4	5
1) The division of tasks and responsibilities in the firm is well-defined and supports the effective implementation of our strategic initiatives.					
1) The firm's reporting relationships facilitate coordination and communication among different departments or teams to achieve strategic goals.					
2) The strategy control process of the firm fosters trust and collaboration among different stakeholders and partners.					
3) The firm's information and operational control systems provide timely and accurate feedback on our performance.					
4) Decision-making processes in the firm are aligned with our strategic objectives and ensure efficient resource allocation.					
5) The firm's leadership team consistently demonstrates a commitment to the organization's strategic goals and fosters a sense of accountability among employees.					
6) The firm's information and control systems in our organization facilitate effective communication and coordination across different departments or teams.					
7) The firm utilizes operational control systems to monitor and regulate strategic activities.					
8) The firm's information systems in our organization provide timely and accurate data that is critical for strategic decision-making.					
9) The firm utilizes technology tools and systems that automate key tasks and improve operational efficiency.					

**Section F: Performance of SME'S**

Using a scale of 1-5, where 1= strongly disagree; 2=disagree; 3=Neutral; 4=agree; 5=strongly agree; Please indicate the extent to which you agree with the following statement on strategy evaluation.

<b>Statement</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
1) The clearly defined strategic goals of the firm contribute to its overall performance.					
2) Thorough market analysis conducted by the firm positively impacts its performance.					
3) The effective utilization of the firm's competitive advantage enhances its performance.					
4) The strategic allocation of resources by the firm maximizes its performance.					
5) The presence of a well-developed risk management strategy in the firm has a positive impact on its performance.					
6) The firm's embrace of innovation and adoption of new technologies significantly enhances its performance.					
7) Long-term planning in the firm contributes to sustained performance.					
8) The firm's investments in developing its workforce positively influence its performance.					
9) Strategic collaborations with partners have a positive effect on the firm's performance.					
<b>The firm's active monitoring and evaluation of its strategic planning efforts lead to improved performance.</b>					

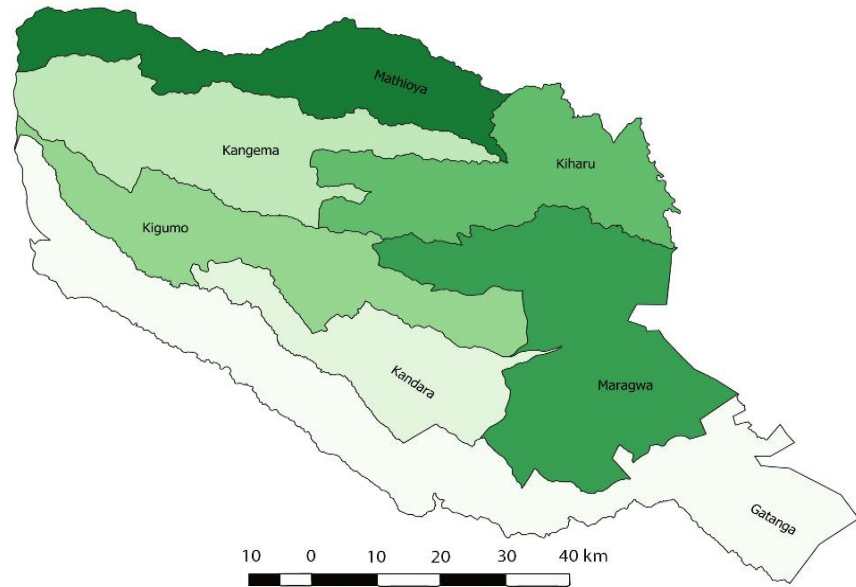
*The End!*

*Thank you for your time.*

**Appendix III: List of Dairy Producing Enterprises (SMEs) in Murang'a**

No.	Name Of Group Or Cooler	County
1	Ithiru	Muranga
2	Ruchu	Muranga
3	Kagundu-ini	Muranga
4	Gaichanjiru	Muranga
5	Maruka	Muranga
6	Gakungu	Muranga
7	Mwembe	Muranga
8	Kakaki	Muranga
9	Central Aberdare	Muranga
10	Kigumo 18	Muranga
11	Makomboki	Muranga
12	Kiruri	Muranga
13	Kiairathe	Muranga
14	Kiarwaki	Muranga
15	Muraranda	Muranga
16	Kagata	Muranga
17	Kahuro	Muranga
18	Gatanga Mwangaza	Muranga
19	Kiarutara	Muranga
20	Githanha Gaate SHG	Muranga
21	Uiguano	Muranga
22	Ngararia	Muranga
23	New Nginda	Muranga
24	Ichagaki	Muranga
25	Kamahuha	Muranga
26	Sabasaba	Muranga
27	Muthithi Kambi	Muranga
28	Gikoe	Muranga
29	Kanjama	Muranga
30	Wanjegi	Muranga
31	Mbiri	Muranga
32	Umaja	Muranga
33	Umoja-Kamune	Muranga
34	Umoja Kaweru	Muranga
35	Umoja Kamacharia	Muranga
36	Kahumbu	Muranga
37	Kigoro	Muranga
38	Iyegi	Muranga
39	Kagaa	Muranga
40	Kihumbuini	Muranga

## Appendix IV: Study Location



**MURANG'A COUNTY - AREA OF JURISDICTION**

## Appendix V: KUREC Clearance Letter



### KABARAK UNIVERSITY RESEARCH ETHICS COMMITTEE

Private Bag - 20157  
KABARAK, KENYA  
Email: [kurec@kabarak.ac.ke](mailto:kurec@kabarak.ac.ke)

Tel: 254-51-343234/5  
Fax: 254-05 1-343529  
[www.kabarak.ac.ke](http://www.kabarak.ac.ke)

OUR REF: KABU01/KUREC/001/10/09/25

Date: 2<sup>nd</sup> Sept, 2025

Nicholas Owino Obare  
Reg. No: GMB/NBE/1368/09/11  
Kabarak University,

Dear Nicholas,

**RE: EFFECT OF STRATEGIC MANAGEMENT PROCESSES ON PERFORMANCE OF DAIRY AGRIBUSINESS SMALL AND MEDIUM ENTERPRISES IN MURANG'A COUNTY, KENYA**

This is to inform you that **KUREC** has reviewed and approved your above research proposal. Your application approval number is **KUREC-100925**. The approval period is **2/09/2025 – 2/09/2026**.

This approval is subject to compliance with the following requirements:

- i. All researchers shall obtain an introduction letter to NACOSTI from the relevant head of institutions (Institute of postgraduate, School dean or Directorate of research)
- ii. The researcher shall further obtain a RESEARCH PERMIT from NACOSTI before commencement of data collection & submit a copy of the permit to **KUREC**.
- iii. Only approved documents including (informed consents, study instruments, MTA Material Transfer Agreement) will be used
- iv. All changes including (amendments, deviations, and violations) are submitted for review and approval by **KUREC**;
- v. Death and life-threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to **KUREC** within 72 hours of notification;
- vi. Any changes, anticipated or otherwise that may increase the risk(s) or affected safety or welfare of study participants and others or affect the integrity of the research must be reported to **KUREC** within 72 hours;
- vii. Clearance for export of biological specimens must be obtained from relevant institutions and submit a copy of the permit to **KUREC**;
- viii. Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. Attach a comprehensive progress report to support the renewal and;
- ix. Submission of an executive summary report within 90 days upon completion of the study to **KUREC**

Sincerely,

**Prof. Jackson Kitetu PhD.**  
KUREC-Chairman

Cc Vice Chancellor  
DVC-Academic & Research  
Registrar-Academic & Research  
Director-Research Innovation & Outreach  
Institute of Post Graduate Studies








As members of Kabarak family, we purpose at all times and in all places, to set apart in one's heart, Jesus as Lord.

(1 Peter 3:15)

Kabarak University is ISO 9001:2015 Certified

## Appendix VI: NACOSTI Research Permit

 <b>REPUBLIC OF KENYA</b>	 <b>NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY &amp; INNOVATION</b>
Ref No: <b>164281</b>	Date of Issue: <b>16/September/2025</b>
<b>RESEARCH LICENSE</b>	
	
<p>This is to Certify that Mr.. Nicholas Obare Owino of Kabarak University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Muranga on the topic: <b>EFFECT OF STRATEGIC MANAGEMENT PROCESSES ON PERFORMANCE OF DAIRY AGRIBUSINESS SMALL AND MEDIUM ENTERPRISES IN MURANG'A COUNTY, KENYA</b> for the period ending : 16/September/2026.</p>	
License No: <b>NACOSTI/P/25/4179812</b>	
<b>164281</b>	
Applicant Identification Number	Ag. Director General <b>NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY &amp; INNOVATION</b>
	Verification QR Code
	
<p><b>NOTE:</b> This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.</p>	
<b>See overleaf for conditions</b>	

**Appendix VII: Evidence of Conference Participation**



## Appendix VIII: List of Publication

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ISSN 2305-784X (print) ISSN 2410-8383 (online)

<https://journals.kabarak.ac.ke/index.php/kjri/>

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### **Effect of the Strategic Planning Process on the Performance of Dairy Agribusiness SMEs in Murang'a County, Kenya**

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**Abstract**

Kenya's dairy agribusiness sector is a critical pillar of rural livelihoods and food security, yet many small and medium enterprises (SMEs) continue to experience low productivity, volatile markets, and weak managerial systems. Strategic planning offers a potential mechanism through which these enterprises can clarify goals, align resources, and adapt to dynamic operating environments. Guided by the Resource-Based View and Contingency Theory, this study examined the effect of the strategic planning process on the performance of dairy agribusiness SMEs in Murang'a County, Kenya, with particular attention to vision clarity and the use of documented strategic plans. The study adopted a descriptive cross-sectional design and employed a census of all 40 dairy agribusiness SMEs registered with the Kenya Dairy Board in the county. Four managerial staff were targeted per enterprise, yielding 143 valid responses. Data were collected using structured questionnaires and analyzed using descriptive statistics, Pearson correlation, and simple linear regression. Findings indicate that dairy agribusiness SMEs engage in strategic planning at a moderate level, with responses reflecting partial and uneven adoption of formal planning practices. A large proportion of respondents expressed neutral perceptions regarding goal clarity, market analysis, and long-term planning, suggesting that strategic planning is present but not fully institutionalized. Correlation and regression analyses revealed a positive and statistically significant relationship between strategic planning and firm performance, although the proportion of explained variance was modest. This indicates that while strategic planning contributes meaningfully to performance, it operates alongside other internal and external determinants. The study concludes that structured and participatory strategic planning enhances both financial and non-financial performance outcomes among dairy agribusiness SMEs. It recommends that county governments and sector stakeholders strengthen managerial training, mentorship, and the use of data-driven planning tools to support sustained competitiveness and growth within Kenya's dairy value chain.

**Key Words:** Strategic Planning, Dairy Agribusiness, SMEs, Performance.

DOI: <https://doi.org/10.58216/kjri.v15i02.670>

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